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HYGEIA

The HEALTH MAGAZINE

PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION

May, 1933

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HYGEIA

THE HEALTH MAGAZINE

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MAY, 1933

The Fundamentals of Good Medical Care

THE MAJORITY of people have little if any conception of what constitutes good or adequate medical care. Most persons know that when they suffer pain, they want to be relieved of their suffering. Human beings recognize promptly a feeling of nausea or of weakness, and they want to have again the feeling of strength sufficient to permit them to carry on their usual activities. Most intelligent persons know that a suitable examination should include a number of questions as to the patient's health and the conditions that brought about his illness, a certain amount of study of his physical condition and pertinent laboratory examinations. The vast majority of persons, however, are content to rely on the physician's own judgment as to how many and what questions should be asked, how many and which secretions and excretions should be examined, and the extent to which the x-rays and similar accessories should be used. The public is, moreover, accustomed to judge for itself in deciding when to discontinue medical attention, although there is plenty of evidence that most persons are also likely to discontinue treatment too soon.

In a recent attempt to evaluate the fundamentals of medical care, Dr. Roger I. Lee and L. W. Jones point out certain essentials. Good medical care demands the attention of a competent physician. There is no place in such care for the magic of the quack or the cultist. Next, good medical care demands not only the treatment of disease but the prevention of disease. It requires intelligent cooperation between the patient and his doctor. It demands consideration of the patient as a human being and not as a collection of organs and tissues. It requires personal relationship between doctor and patient. The family physician, it is now generally recognized, is best qualified to supervise the health of members of the family, to diagnose disease conditions and to treat them in the majority of cases. The report of the Commission on Medical Education indicates that more than 85 per cent of the conditions for which people consult doctors can be satisfactorily diagnosed and treated by a good general practitioner. Indeed, Dr. Lee asserts that no amount of technical skill and no combination of mechanical and laboratory devices is as useful in the diagnosis of disease as a personal knowledge of the history of the patient and some understanding of the situation of his family and of his environment.

THE GENERAL principles here cited may be further expanded by the realization that suitable medical care demands also some attention to social welfare. It is now well established that illness may be associated with poor ventilation, overcrowding, malnutrition and similar social factors. The average person who is ill, however, is not likely to pay much attention to the general principles underlying good medical care. He is much more concerned with knowing exactly what is needed in his particular case. First he wants to know what is wrong. Certain diseases can be diagnosed almost at a glance; for instance, measles, scarlet fever and diphtheria in typical cases. But it may be necessary in doubtful cases to make assurance doubly sure by the use of suitable laboratory procedures. In diphtheria the physician wants to take a culture of the throat; in scarlet fever he may want a history of exposure, and he may

EDITORIAL

wish to make special tests of the skin. In measles he will look for Koplik spots. In practically every case of acute communicable disease, it is necessary to have a record of the history of the case; to take note of the throat, the tongue and the skin; to keep a record of the fever, and to examine the chest frequently to detect at once any complications in the heart and lungs.

DURING THE LAST fifty years, medicine has advanced tremendously through the contributions of associated sciences which have aided greatly in expanding and intensifying the powers of various human senses. The physician no longer depends on the naked eye. He is able to look into practically every organ by the use of the x-rays and associated dye substances. In an earlier day much of what can now be determined accurately was guess work. This does not mean that it is necessary for the doctor in every case under his observation to determine the functional capacity of the kidney, to visualize the gallbladder or to inject air into the ventricles of the brain to determine whether or not the situation in that section is normal. It does mean that he is able in the presence of conditions which point toward extraordinary developments in any organ to utilize these methods if necessary in making more certain his diagnosis. As has been said, the majority of persons do not have any knowledge of the existence of such methods, and even if they did have this knowledge they would not be able to determine for themselves their necessity in any particular case.

Therefore it is for the physician to choose wisely the procedures that are to be performed since practically all of them are costly. The patient wants to get a competent diagnosis as quickly as possible and, at the same time, at the most reasonable cost. He then wants to be treated as efficiently as possible within his means.

There are many things which can be done for a patient in a hospital which cannot be done for him when he is at home, and the history of medicine shows that in many instances he can recover quite as definitely and certainly at home as in the hospital. Here again the patient is not himself a fit judge of what is essential and what is merely an addition to comfort and lessened responsibility. He must rely for the decisions on his doctor. If his doctor knows him as a human being, if the doctor knows about his family and circumstances, the doctor is able to judge wisely. If the service is being sold on the basis of price alone without reference to its necessity and without reference to the peculiar circumstances of the patient himself, it is likely that many things will be sold that are not necessary.

ALL THESE circumstances indicate, obviously, that there is one fundamental factor in good medical care, and that is an honest and competent physician who has toward his patient the type of intimate and personal relationship that represented the greatest factor of value in medical care in the past. Such a physician will determine for his patient the things that are needful, will prevent exploitation of the patient by the application of unnecessary procedures, will economize for the patient in the decision as to whether or not the patient will be cared for in the home or in the hospital and will determine the quality of hospital that is both necessary and desirable. The details of good medical care in any particular case are, after all, not to be considered by the patient. There is just one decision that he must make; that is, to choose a physician in whose judgment and understanding he can have confidence.

Sleeping Sickness

Alarming Social Aspects of a Tragic Menace

By ADRIAN SCOLTEN

HIS NAME is John Smith. He is 32 years old. He is in the "asylum for the insane," surrounded by babbling idiots, vacant countenances and the slovenly, bedraggled inhabitants of a world of isolation.

Eight years ago he received a Master of Science degree in structural engineering from the University of Wisconsin. He earned his way by working nights in the university power house and spending the summers working for a construction company somewhere in the brush of Canada. Though he heard rumors of gay student life and read of it in the newspapers, that was as close as he ever came to it. For eight years, days and nights of earnest work had made up his life program.

Immediately on completion of his college work a Canadian construction company, which had followed with interest the career of this promising young man, gave him a position in its New York office.

John married and took his wife to New York. Days of fascinating work and study, with deep satisfaction in his own power of achievement, filled him with happiness. It was all so worth while. The struggle had all been for a purpose, and now the plan was working itself out. Night after night he came home radiantly happy. His wife, who had spent all her life in a small Canadian town, was thrilled with the great metropolis and the re-

markable accomplishments of her husband. John had had no parents to help him, he had done it all himself, and he was a success.

One day John came home with the news that he was to be sent to South America. He would have charge of the construction of a power dam with thirty men under him, at a salary of $10,000 a year. Busy days followed, hampered only by a week of what was diagnosed as "flu." John was in bed with a severe backache, chills and fever. Within two weeks he was at his desk again, apparently in perfect health.

In the midst of the preparation to travel southward, queer sensations began to come over John. At times he found his lips, arms and legs shaking, as if with the palsy. He saw things double. At first this startled him; then it worried him. He looked in the mirror and saw some of the wrinkles ironed out of his face, but it was an unpleasing smoothness, for the mask-like deadness of his expression was utterly unlike his usual animated countenance. A peculiar rigidity and uncertainty came into his walk. His wife noticed that his arms no longer swung freely and easily but clung to his sides. He felt insecure, worried and irritable.

This irritability increased until it became beyond his control. His office mates noticed it, and his wife became alarmed. He was utterly unlike his usual calm and happy self. It was plain that he could not go to South America.

In his desperation, John visited a neurologist, who told him that the symptoms he displayed made only one diagnosis possible: sleeping sickness, known to the medical world as epidemic encephalitis. This was a rather generally unrecognized disease which often attacked the base of the brain and worked a disconcerting aftermath on its pathetic victims. The doctor admitted that he could do nothing for him but prescribe a sedative, which lightened the load to some extent, but John became worse, physically and emotionally.

A long period of hospitalization followed, which, though it exhausted all his savings, did little toward the relief of his condition. It seemed plain that there was nothing ahead of John except the poor-house or the insane asylum. There was no provision by the state for the victims of his disease; there was no agency which could allow unlimited hospitalization. Nobody seemed to care.

Mrs. Smith, therefore, was forced to go back to her old mother in Canada. John went to the state hospital for the insane. His is a voluntary commitment. He is not insane. He senses the humiliation of his position and is enduring what is to his active mind and splendid spirit only a living death. Nothing seems to be left to John but the power to suffer. A sad return for the strength of his courage and the indomitable effort of his early youth!

He spent the summer working for a construction company somewhere in the brush of Canada.

John Smith could be you. Through no fault of his own the dreadful disease fell upon him in the flowering time of his life, as hail, which, falling on a Dakota wheat field before the golden harvest, leaves an aftermath of utter havoc in its wake.

Afflicted with a disease little understood and frequently unrecognized, these pathetic victims, rendered unfit for economic life, become part of the "human wreckage" of society. Like John, the majority cannot afford hospitalization for an unlimited period. After floating about, emotionally and physically undone—a sad commentary on an age devoted to enlightened benefaction—they gladly go to the only place provided for them, the insane asylum.

Consider also, for example, the case of Peter.

Peter was 10 years old. He was well equipped mentally, sound physically and stable emotionally; he was an outstanding example of a superior child.

His father and mother had availed themselves of all the information in the field of child training and had applied it with wisdom. The result of their combined intelligent efforts was a source of real satisfaction and pleasure. Everybody loved Peter. He was not a perfect child; his parents would not have wanted him to be. He was a natural, normal, fun-loving boy.

It was not until he was 8 years old that he had any illness other than measles and chicken-pox. A week of illness at this time alarmed his parents and disturbed the doctor. The following period of convalescence was slow, but a steady progress suggested that this episode in Peter's life was over. Peter returned to school, seemingly the same boy who had left it several months before.

A year later, strange reports came back to his parents, descriptive of nothing like their own child. He talked incessantly, and nobody could make him stop; then he would stop entirely and seem to pass into a state of coma, utterly oblivious of the existing world. He would rise suddenly, strike another child on the head, make faces or dance in front of the class with pencils in his ears.

At home his mother would hear cries from the play yard and see Peter pulling the nice clean little Gerald by his ear or his blonde hair across the ash pile. Gerald hated to be dirty, and Peter knew it.

Peter's parents were in despair. There was nothing in the books with which to meet this erratic turn of behavior. A new mental test

was given, and Peter still rated superior. Then he began to steal things and hide them under the stairs at home, bringing out choice bits to display with all the pride of achievement. On being questioned, he ran away from home and was not seen for several days. During this time he stole fruit from the market stands, took money from the newspaper stands and slept in an old barn at night.

This took him into court, and the distracted parents went to a prominent psychiatrist for help and guidance.

The illness Peter had suffered was one which, when it attacks children, frequently carries in its wake a long succession of behavior disorders. The child was conscious of his misbehavior and unusual conduct but did not have any power to direct or control it. Peter was another victim of epidemic encephalitis, which is relentlessly cruel in its hold on children.

Peter could not stay in school; his pranks and frequent emotional outbursts made this impossible. He could not be placed in a private institution for problem children; that was too expensive. No boarding school would take him; he might contaminate the others. He could not be committed to a home for the feebleminded because he was superior mentally. Because he was not physically ill, hospitalization was out of the question.

When the case was up for court decision, the judge sentenced Peter to the reform school. To him, this boy was the typical incorrigible youth who must be segregated in order that society might be protected. The boy stole, lied, was cruel and ran away from home; he thereby exhibited what the judge knew only as criminal tendencies from which he might never recover.

To the court, Peter's own acts justified incarceration for a five year period in the cheerless and degrading environment of the reform school. A child welfare worker who was well acquainted with Peter's disease and his escapades felt that this was a travesty of justice. However, she could not offer any alternative. Peter was a social problem. He could not be controlled by his parents. Society did not provide any other place for such as he. She could offer no suggestions; therefore, the law took its course. Peter is now in the reform school.

The foregoing cases are examples of the kind of problem the neurologist and psychiatrist encounter in the treatment of epidemic encephalitis, a disease which frequently goes by unnoticed until the onset of the phase known as paralysis agitans.

The treatment at present too often consists in confining adults to insane asylums and children to reform schools.

Epidemic encephalitis has well been called "a disease of sober living." Its tentacles reach out and draw in hundreds of innocent victims in every state of the Union each year; it is as insidious as influenza, tuberculosis or infantile paralysis. It differs from other innocently acquired diseases, however, in that the stigma of society is placed on its victim. He is unsocial; therefore society has no place for him.

Children, with all of life before them, present an even more baffling and pathetic problem. It is my opinion, after surveying the literature and observing the children who have suffered from the disease, that provision should be made for the proper care of these children. In every state the cases of epidemic encephalitis should be given the same thoughtful attention that is given to the crippled, blind or deaf child.

A child with one of the aforementioned handicaps enlists one's sympathy and intelligent care. The child suffering from sleeping sickness is too liable frequently to be called a "mean" child or "a hopeless case." Hence he is punished instead of helped.

The contents of letters which I received from the state boards of health two years ago, supplemented by letters from neurologists in all sections of the country, force the conclusion that there are thousands of cases of sleeping sickness in America for which no care has been provided. No state has provided means for satisfactory treatment. Unable to find any place where they are wanted, the disturbed victims are plunged into greater despair.

In the minds of the well informed, the solution lies in getting the information to the public. The aroused public sentiment will result in the provision of hospitals or colonies where the etiology of the disease can be further studied and the victims can be isolated. Here, too, they can be given the best empiric treatment now available. In these proposed colonies the victims of this dreaded disease can be socially useful and certainly more contented mentally. It has well been said that "busy hands make happier hearts."

Sleeping sickness is today a vital problem, a problem that has been neglected since it was recognized in 1918, but is becoming increasingly insistent in its demand. Even among the medical profession, too often only the neurologist and the psychiatrist sense the enormity of it.

It is hoped that this paper will carry some gleam of conviction which will have a part in bringing about the solution of this almost untouched social problem. Through legislative action or private philanthropy, an important move to aid these helpless sufferers will have been accomplished.

It is my belief that through establishing colonies with farm, school and hospital facilities for these patients much misery created by this disease can be reduced, the source of infection can be isolated, the etiology of the disease can perhaps be discovered, and the eradication of the disease may become possible.

"Where there is no vision, the people perish."

Little America

On his journey over life's uncharted sea, Little America faces perils as great as those encountered by Admiral Byrd.

H. Armstrong Roberts

By OLIVE B. CORDUA

THE SUCCESS of Admiral Byrd's trip into the uncharted South was dependent on one great fundamental, that of thoughtful preparation. Greatest among the preliminary projects of his expedition was the primary consideration of a balanced and adequate dietary for himself, his men and his huskies. Here was a leader with high inherent intellectual capacity, unflagging diligence and a constantly increasing open-mindedness, a leader who had a desire to take advantage of all the scientific truths in a swiftly changing civilization.

Scientific investigation into food values and human needs had advanced certain facts which were of such value that without them failure was inevitable. Perplexing problems baffled other great adventurers. Many poignant tragedies may be read in the dark records of those who never returned but who, nevertheless, left in the archives of the vast frozen expanses, evidence of death in the midst of plenty, and of suffering and privation because of an inadequate food supply.

It is to knowledge of these facts that the success of Admiral Byrd's expedition has been in large measure attributed.

Many persons fail to realize fully the extent to which present-day knowledge of food values and bodily needs is dependent on scientific research and discovery. It has required the infinite patience and professional devotion of countless humble laboratory workers. Back of all is the enormously potent, indispensable contribution of sound, technical study.

Admiral Byrd's great adventure into the unknown and his brilliant achievements pale into insignificance when they are compared with results obtainable at home where Little America awaits on his voyage through life, awaits while his mother prepares the food for his journey. His future also depends on the intellectual capacity, the diligence and the open-mindedness of his parents or guardians, but most of all on one leader, his mother. The success of this mother's valiant leadership will never be broadcast over the ether; there will be no fanfare of trumpets to announce her approach. The Great White Way will never be snowed deep with ticker tape to acclaim her deed of valor and heroism. None of these! Still, her gift will be a greater and more lasting gift to posterity if she applies the same precepts in the conduct of Little America over life's uncharted sea.

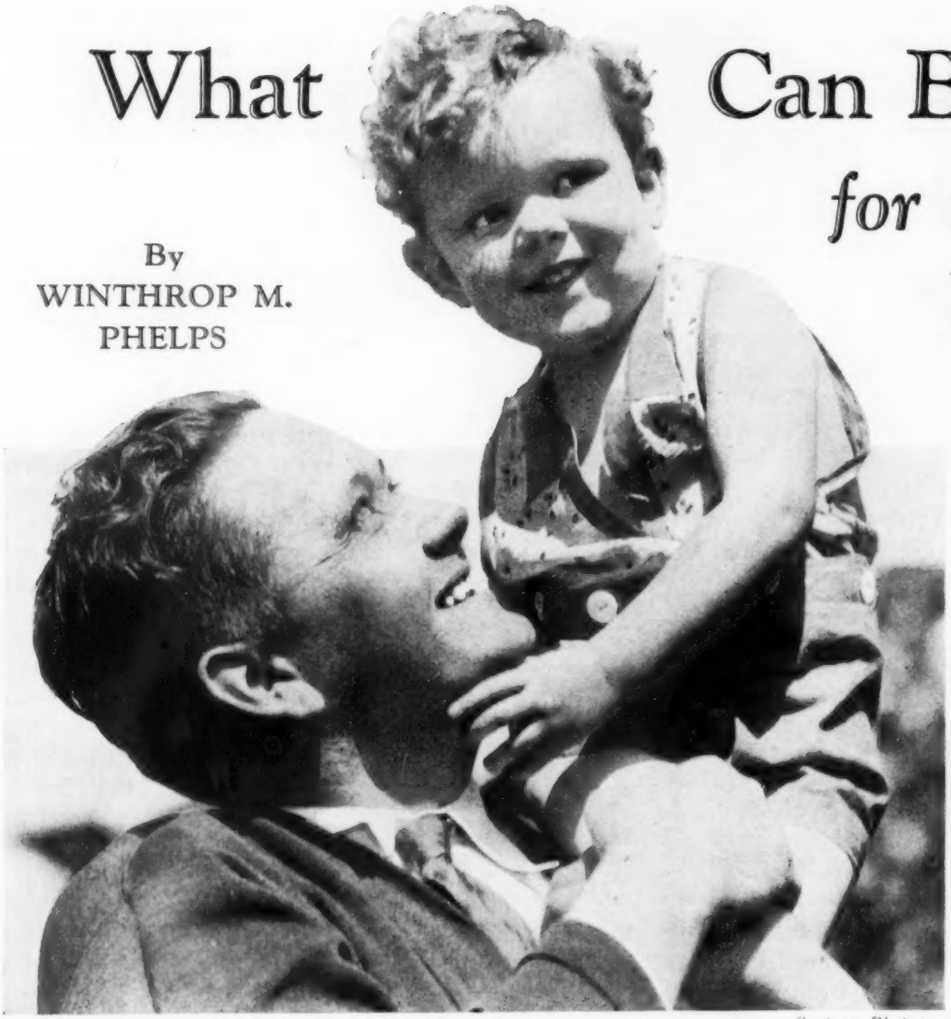
Not all mothers have learned the lessons taught by these courageous adventurers. Today, however, ignorance of the laws governing health is not being excused. Every mother is expected to know these scientific facts and to apply them to the everyday business of living.

The interval of child growth is extraordinarily long as compared with that of other young mammals. This long period of childhood is of profound importance to the well being of the young voyager if he is to attain the goal of optimal adulthood for which he is setting sail.

Practically all present dietary knowledge is a development of the twentieth century. Fundamental principles underlie the science of nutrition. The mother who develops a system of intelligent food administration to the youth in her charge must be guided, like Admiral Byrd, by careful study, conservative planning and the dictates of moderation. Her attainment will be an everlasting contribution to humanity.

What Can Be Done *for the* Birth Injured?

By
WINTHROP M.
PHELPS



Century Photos

AT LEAST 60,000 crippled children in the United States are the victims of injuries to the brain at birth. The fate of these children is particularly tragic because they are handicapped from the beginning of life in their endeavors to learn and to express themselves. Consequently, they are liable to be stunted in mental growth and to be more or less cut off from normal contacts because of their grotesque and distorted actions. Many who are endowed with normal intelligence lack coordination of muscles to the extent that they are scarcely able to walk, to feed themselves or to perform services which would make them relatively independent. They do not fit into homes or into institutions for the mentally deficient, which are practically the only places now open to them.

In spite of extensive investigation of this problem, there are still many differences of opinion concerning what constitutes a birth injury, how such injuries are caused, what their frequency is and what their after-effects are. It is generally conceded, however, that a large proportion of infant deaths are the result of damage to the brain, incurred during labor, and also that physical and mental defects seen in children, particularly those associated with inability to exercise control over certain sets of muscles, are in large part the aftermath of brain injuries at birth.

Obviously the study of the causes and prevention of birth injuries is first in importance. Certainly through greater knowledge of the strains and stresses to which the nervous system of the infant is subjected during labor, obstetricians and neurologists may expect to lower the frequency of injuries. It is unlikely, however, that injuries at birth can ever be entirely prevented. It is therefore necessary that every effort should be made to minimize the effects of damage to the nervous system, and this is the particular problem of the orthopedist.

Experience in recent years indicates that more can be done for children suffering from paralysis as a result of birth injury than has been commonly supposed in the past. Through skilled and patient treatment it is possible in many instances to bring about decided improvement in the child's control of affected muscles and to instil confidence into the patient so that he is able to give expression to his thoughts and feelings and to take a place in the world commensurate with the degree of intelligence he possesses. This has been demonstrated in the work done for a few children whose parents have ample means, and in the achievements of institutions such as those at New Haven, Conn., Newington, Conn., and Vineland, N. J., and the Children's Hospital in Boston. However, there are by no means sufficient facilities in existing institutions for dealing with problems of birth palsy; one cannot say, therefore, that the full possibilities of this work have yet been explored.

Care must be taken not to raise the false hopes of parents who have children with birth

injuries. In instances in which children are mentally deficient, little can be accomplished. The degree of intelligence cannot be changed, and a child who is an idiot or an imbecile will probably remain so. Even with those who are mentally normal, progress is liable to be slow and limited. Nevertheless, with due acknowledgment of limitations, a large field is still open. There is more than an even chance that the child with a birth injury has normal intelligence, and this cannot be determined by his appearance. Feeblemindedness must not be confused with mental retardation, which is liable to occur when there is a limitation of the means of expression. The fact that a child drools and makes inarticulate sounds because facial or speech muscles are affected is no more an indication of subnormal mentality than is the lack of control over arm muscles, for example. Binet tests and other mental tests for intelligence have little value in these children, because they depend entirely on motor response of some sort. Mental tests which take consideration of motor handicaps are now being developed.

While it is obviously clear that little if anything can be done for the mentally deficient child with a birth injury, it is also evident that snap judgment is ineffective in determining intelligence.

The situation of a great number of these children is not unlike that of Helen Keller, although Miss Keller was handicapped as the result of disease rather than of birth injury. As a child she had no ordinary means of expression and might have grown up entirely inarticulate and cut off from the world if she had not had special training. Treatment for the child is clearly indicated in cases in which the mentality is obviously normal. In cases in which it is difficult to determine the mentality, treatment should be given to determine the child's degree of response and initiative. Such treatment may take many years.

Classification of Birth Injuries

There are many types of birth injuries, most of which fall into one of two classifications. To the first of these groups belong injuries to the cortex, or outer layer, of the brain; these result sometimes from the use of forceps in prolonged or difficult labor. Cortical hemorrhages may injure parts of the brain that exercise control over certain muscles, thus interfering with their proper use and producing what is known as spasticity. This means that when the child attempts to contract a given muscle, the opposing muscles also contract, and motion becomes impossible. The affected muscles become stiff and hard, and the child is unable to use his arm, leg, speech apparatus or that part of the body which the affected muscles should operate. In this general type of injury the mentality is frequently impaired because the area in the brain which has to do with intelligence is near the cortical area that has been injured.

The second general type of birth injury is frequently caused by undue traction or strain on the neck of the child, resulting in damages to veins and tissues at the base of the brain. Hemorrhages may then disturb the area that has to do with coordination of muscle movements. If the child tries to contract one of the muscles controlled in the affected area, other muscles are stimulated simultaneously and the child goes through a series of constantly recurring, jerky, grotesque movements which are known as athetoid movements. A cup which he attempts to lift to his lips may fly across the table. The person with this type of basal athetoid injury is rarely feebleminded because the damage to the brain is in an area in no way associated with intelligence.

Involvement of Facial Muscles

There are, of course, many other sorts of damage at birth, such as a development of multiple hemorrhages throughout the brain which will give a combination of spastic and athetoid symptoms, either with or without feeblemindedness. There are also localized damages which will result in symptoms of loss of balance sense. But the majority of injuries are of the cortical spastic type or the basal athetoid type, already described, the first occurring with or without feeblemindedness and the second occurring without feeblemindedness. Either of these types may have profound involvement of the facial muscles, the speech and swallowing muscles, and the muscles of expression.

If children with the type of injuries described have a normal mentality and are allowed to remain untreated until they are 6 or 7 years old, they will develop bizarre habits in the use of arms and legs, face, tongue and other parts of the body. The elimination of these habits and substitution of some simpler methods for using the muscles often produce a tremendous change in the appearance of the child and in his ability to do things. This may be compared to the way in which an untrained person will teach himself to play the piano and the way in which a trained pianist will play. Better results will ultimately be attained by the trained pianist, although self teaching may seem to progress faster at first. In older children, therefore, the eradication of bad habits of motion is the first important step. In babies and younger children this part of the treatment is paralleled by the teaching of good habits of motion before bad ones have been developed.

Another element of the treatment is teaching conscious relaxation. In small children this is accomplished by means of some quieting stimulus from which a relaxing reaction results. Massage may be the stimulus used at first; this is associated more and more with other stimuli

in the environment of the child until a consciousness of the ability to relax under greater difficulties and more distractions is developed. With older children the cooperation of the patient is a great help in this treatment.

A third part of the treatment, especially in the spastic type, consists in moving various joints over and over again in order to form a mental picture of the normal motion of these joints. This has a tendency to reestablish a motion pattern through nerve channels other than those which have been destroyed. In the athetoids an attempt is made definitely to reduce the excess or "overflow" movements which are the result of many muscles responding to a willed contraction of a single muscle. This is done by beginning improvement through a slight range of motion, gradually extending the range as the single muscle can be taught to contract. In younger children the stimuli to motion are often singsong rhymes which the child unconsciously associates with the motion to be performed; in older children, the exercise is done usually to a count.

The treatment must begin with the back, neck, shoulders and hips, or, in other words, with the larger, more centrally placed joints. The reason for this is that while a hand or foot could easily be treated at first, it would be of little value if the joints of the arm and back were out of control.

Treatments of the back, shoulders and hips may extend over a period of years before work is done on the elbows, knees and hands. Therefore, except in relaxation and eradication of some bad habits of motion, little obvious improvement may be noted at the end of the first year. The treatment consists in preparatory work which must precede the work on the finer muscle groups. It is difficult to determine in advance how much improvement will be effected, but the most hopeful cases are those with obviously good mentality in which there is outwardly the greatest appearance of need for treatment and in which ample time can be given to treatment.

Preparation of Technicians

It is necessary for one trainer to take entire charge of the treatment of the patient. Changing trainers will result in loss of time, similar to the effect that a change of schools has on the normal child. Mothers rarely can give satisfactory treatment to a child. Focusing of the mother's attention more strongly than ever on the difficulties of the child leads in many instances to serious nervous strain on the part of the mother; and this is especially true if there are other children to whom attention must be given. This strain may be reflected in the child and may, therefore, complicate the treatment. Training of mothers for this purpose is also extremely difficult because of the amount of detail which must be taught. Preparation of a technician for this work takes at least a year and in most cases two years in addition to a previous training in physical education. The best technicians are women or men from physical education schools with supplementary training in this particular field.

Methods of Caring for Birth Injured

When children needing treatment for birth injuries live close to a center in which such treatment is given, it is possible for the children to live at home and to come in daily for treatment. In such a plan, however, there are missing factors, such as opportunity for occupational therapy and schooling suited to the condition of the child. Most of these children are unable to attend the public schools because they cannot keep up with other children physically, no matter how capable they are mentally. Furthermore, the public schools frequently do not like to have children with birth injuries. The necessity of bringing a child to the clinic daily for five years is also a difficult burden for the person who must do it; the cases that are kept up for this length of time are few.

Another scheme for providing treatment is to have a trainer live in the family. This is possible when the family is sufficiently wealthy, but it is usually impractical because only one hour a day of the trainer's time is required; yet he must have a living wage.

The most desirable method of caring for children with birth injuries is in an institution for chronic conditions. The cost of care in a hospital for the treatment of acute conditions is much higher than in an institution for the chronically ill, who require less constant attention. The value of a special institution for birth injuries is indicated by the work at Vineland and Newington. The children in these institutions have the benefit of special educational and occupational facilities, adjusted to the physical handicaps of the child. Newington, however, has been so crowded with patients with infantile paralysis that it will be impossible for a long time to admit many children with birth injuries.

It may further be said that a great value of special institutional facilities for children with birth injuries would be their use in training physicians and technicians for service in this field. There is now a great dearth of technicians, skilled in this work, to serve in institutions for crippled children. Certainly there could be no better place for most children with birth injuries than an institution equipped to provide muscle training, occupational training and educational and recreational facilities, and designed to rehabilitate the child and to give him the confidence and control necessary for the task of taking a useful place in the community.

The Child and the Doctor

By H. G. BULL

Children's corner in a doctor's waiting-room, where boredom and fear do not enter.

TREMENDOUS STRIDES have been made within the last few years in the hygiene of childhood, in the prevention of disease in children and in the understanding of the child mind. No subject arouses more interest than that dealing with the welfare of the youngest generation. The establishment of foundations for the study of this subject, the popularity of the various magazines devoted to it, the revision of school and college curriculums to include it in their courses, and the establishment everywhere of child study clubs bespeak the eagerness with which parents all over the world rally around the standard that leads on to the sanest, healthiest and happiest childhood.

Let it not be thought that the rank and file of the medical profession has not fallen in line with this salutary movement. More than ever before are the younger men and women following up their general training with a year or two in special study in pediatrics, with the intention either of limiting their practice entirely to children or of paying particular attention to them in their general practice. The doctors are legion who, feeling the interest that is aroused on behalf of preventive medicine in childhood and sharing the general enthusiasm, have gone to one or another of the pediatric centers to spend a month or more in observation of the newer methods.

The relationship between the child and the doctor ought to be a pleasant experience for both, and with properly directed cooperation on the part of parents, this highly desirable consummation is easy to achieve. Once on a time, among certain types of people, the doctor was used as a bugaboo to intimidate children into the behavior which their misguided parents thought suitable to their tender age and station. In the case of children who shrieked with terror at the approach of one of these terrible medical bogies, one could suspect and often establish the fact that threats had been used. "If you don't do as mamma tells you, she'll have the doctor come and cut out your tonsils!" "Do you want mamma to have to call the doctor and have him give you some nasty medicine?" "Now take the castor oil like a good boy, or mamma will have the doctor come and take you to the hospital!" Such reassuring warnings are even yet rather commonly used, but it is to be hoped that the modern attitude is doing much to eliminate them.

Aside from the care of children in actual illness, so many measures of the first importance are now accepted as desirable by most parents that the contact between children and doctors can usually be made when the child is not feeling sick; it is then that he is in a proper state of mind for a successful and friendly approach.

The periodic examination of healthy children for advice as to feeding, habit training and the phenomena of normal development, including height, weight and teeth, is the first approach through which an enduring confidence and friendship may be established between the children and the doctor. Once this relationship is assured, there is little difficulty to be expected from performing the prophylactic measures that call for a little more courage on the part of the child and a little more strategy and tact from the doctor.

These measures consist of the immunization against diphtheria, consisting of two "shots" administered a month apart and followed within six months by a skin test to determine whether immunity has been established; smallpox vaccination, which should be completed by the time the baby is 6 months old, if not earlier; and later, depending on circumstances, immunization against the typhoid group. Typhoid immunization is not done commonly enough, considering the migratory life children are likely to lead in these days of easy transportation. Protection for three years is assured by this measure, and the small discomfort and the inconvenience attending it are a bagatelle compared to an attack of the disease, which may run into an illness of many weeks.

Among other protective measures which may be included in this brief survey are vaccination against scarlet fever and immunization against colds. Summing up the indications for these, I should say that while "cold serum" is far from infallible, it may possibly be useful for persons who catch every cold that comes along or who throw off a cold slowly. Could some one wave a magic wand and banish colds from our midst, many of the respiratory diseases that make hideous the otherwise enjoyable winters would fade into nothingness; for the common cold is the foundation on which is built a great portion of the more serious disabilities such as sinus trouble, running ears and mastoiditis, pneu-

monia and pleurisy; if even a small amount of immunity can be given to susceptible persons by the use of "cold vaccine," this measure may well be worth trying.

As for scarlet fever, people often wonder why immunization against it has not been advocated so widely as has protection against diphtheria. There are several reasons, which in themselves would constitute a treatise. Despite them all, however, I still feel strongly that any disease that can be prevented is better prevented than had.

It is indeed a great comfort to parents to know, in the prevalence of this serious and long quarantined contagious disease, that their own children could not get it if they tried. Children may be immunized against scarlet fever by five injections given hypodermically at intervals of one week.

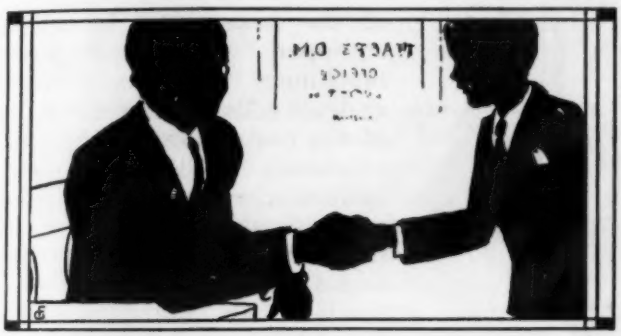
Before this immunization is undertaken, a Dick test, similar to the Schick test for diphtheria, should be used to discover whether the child may not have a natural immunity against the disease, for the number of persons susceptible to it is not nearly so large as those susceptible to diphtheria.

Just as children are prepared for their first fillings at the dentist's office by previous visits when their teeth have been cleaned and when they have been entertained by the nice lady with her pleasant tasting powder and the funny little brushes, preliminary visits to the doctor in early life fit them to face courageously whatever ordeals may come later on in the combat with mumps and measles, chickenpox and whooping cough, not to mention accidents or the adventure into the unknown realm of oblivion which accompanies the removal of tonsils and adenoids.

In developing the best psychologic approach, parents and doctors play almost equally important parts. The things that parents should do in bringing this about are not more important than the things they should not do. It should always be borne in mind that "little pitchers have big ears." Illness should not be discussed in the hearing of young children any more than should the subject of kidnapping. Not only do sleepless nights result from the fear thus engendered, but habits, such as stammering, which may become serious handicaps later on, often have their roots in ground like this. The account of a painful tooth extraction or of a filling that hurt is enough to make a child dread going to the dentist. The tale of the Smith baby who had to have his "ears opened" (what does the

child visualize from this remark?) or of Johnny Smith who had to have ether while his burns were dressed, and countless other bits of news injudiciously told in the hearing of the younger fry too often have far-reaching and unsuspected results in the form of fears and dreads. I know a boy who, despite the fact that he became an eagle scout, was so impressed with the idea of germs in dirt, in impure water and almost everywhere that his boyhood was most unhappy; and so were his parents, realizing too late how their well meant admonitions were like "vaulting ambition, which o'erleaps itself and falls on the other."

The prospect of going to the doctor's office should be viewed as an experience to be enjoyed. There are many unusual things about



such a place that awaken a child's curiosity and interest. It was summed up for me once by a small boy, who complimented me by saying, after his examination was completed and his treatment outlined, "That's a very interesting box you have." He was referring to my medicine case.

In anticipation of some delay in the doctor's waiting-room, which is so often furnished without thought of the youngsters, the wise mother will forestall boredom by taking along a toy or a book for the young patient and thus keeping him amused and happy.

The child who is going to see the doctor should be well fortified with rest; in other words, with a good nap. It is not a bad idea to combine this visit with another errand of quite a different nature, such as a trip to a toy shop, the aquarium or an electric train display.

Another bit of good psychology is to make the child feel that the doctor is looking forward to seeing him, to knowing how much he has grown, or to learning that he passed his grade in school and has won his promotion. One little lad I know once brought me a little painted wooden doll he had made and told me to keep it in my waiting-room for other children to enjoy.

After the examination is finished, the young patient should be retired to the waiting-room, away from the discussion of which he is the subject.

Visits to the home, when a child is actively ill, should be looked forward to, not as one of the curses to which childhood is heir but rather as a privilege; the same sort of psychology should be used as is employed in the office visits.

On the part of the doctor much can be done to make matters easy. First, some effort should be made to arrange at least a small corner

where children may enjoy themselves while awaiting their turn. If a room cannot be devoted to this humanitarian enterprise, a small table with suitable books, blocks and tiny toys should be possible anywhere. The tinier the things, the better children like them. In the inner office also a few things should be arranged with the idea of catching a youngster's eye. Wooden tongue-depressors are most popular, and a child will say "ah" much more readily while the doctor looks in his throat if the patient holds in his own hand one of those nice smooth little sticks that make such fine airplane wings. Tiny bottles are also splendid incentives to perfect behavior.

The doctor should never be hurried with a child, and it is well to tell the cooperative child in advance just what the doctor is going to do. The worst part of the examination should be left for the last. A logical order is (1) inspection; (2) feeling of the child; (3) listening with the stethoscope, "the funny telephone" ("Please sit very still or I can't hear you so well"); (4) the temperature, and (5) the insulting procedure of examining the throat. If the procedure is reversed, as it too often is, beginning with the throat and a gagging and scared youngster, small chance is left for a satisfactory examination of the chest—and little wonder!

A doctor must be a patient man and naturally fond of children in order to treat them pleasantly and at the same time successfully. Children, like dogs, select their friends by instinct. If the doctor likes them, they know it and reciprocate the feeling. If this feeling is not present, another alliance should be sought.

It is becoming increasingly important to establish cordial relations between these two groups of people, and in some of the procedures already mentioned are ideas which, worked out to suit individual needs, will make easier the way of parents who, in relation to their children's welfare, keep their allegiance unfailing and their minds alert.

Shopwork as Stimulating Recreation:

A Healthful Hobby

By
LESTER C. SMITH

"I WISH we had a shop in the basement or in some room of our apartment!" How often one hears this desire expressed. Heretofore, it usually stopped with the wish because it was considered impossible. A shop has been associated with a large manual training room in a well equipped school with its array of machines costing many hundred dollars. In fact, a few years ago I had the privilege of equipping a fine shop in a large apartment building, and the cost ran into thousands of dollars; when the work was completed, the large costly saws, drills and lathes were considered so dangerous that the young boy in the home was not allowed to operate them unless an experienced shop teacher was present for supervision. This spoiled the object of the shop and killed the initiative of the boy; soon the machinery was sold to the second-hand man.

Today, things can be quite different. Increasingly large numbers of people are becoming dwellers in small apartments, but the child as well as the adult in these small homes can still have a well equipped workshop for a small cost; it can be placed in one side of the boy's room, on a back inclosed porch or in a corner of the basement. It can be equipped with small power machinery which is practical and yet sells for but a fraction of the cost of one of the large machines. Drill, lathe, jig-saw, band-saw, circular saw, joiner, mortise machine, sander attachments, metal saws, files and a router may be purchased for less than $400; they can be bought one at a time if necessary. What child or adult would not be thrilled to possess such an outfit?

Recently a retired architect came into my shop to see a jig-saw about which his daughter had told him. He finally tried not only the jig-saw but all the machines. He stayed two hours, and before he left he explained that he was building a home for himself in a suburb and that while he was in the shop he had definitely decided to build a small addition to his sunroom in which he would install some of the small machinery in order to do the things he had always wanted to do for himself. I have since visited the home and found my friend happy beyond his fondest expectation and in better health than he had enjoyed for years. He attributes a great deal of his improved health to the benefits derived from his hand-work, which occupies his mind as well as his physical powers and which costs so little.

Another shop recently visited was equipped with machinery from a "dime store." Although the tools were not of the best quality, the young boy owning them was proud of what they would do. He was able to keep alive his creative and inventive ability, while utilizing the machines to help him in the speedy working out of his creative designs. He was making and selling to his friends, toys and small pieces of furniture which would soon pay for his tools and enable him to buy more and better equipment.

Some persons ask why such young children are allowed to use machinery. This is a machine age, and if the child is to be in the midst of these mechanical activities of life in modern society, he should have some first-hand contact in order to interpret intelligently the industrial world in which he lives. The mind is challenged by this complex industrial world, and the child is stimulated to contribute his share toward the betterment of mankind.

Craft-work demands the cooperation of all the bodily functions, both physical and mental. It thus tends to favor the various physiologic activities such as respiration, circulation, digestion and transpiration; it therefore becomes an important factor in the promotion and maintenance of bodily health. It may be argued that any play-work or bodily exercise will do all these things. But in how many city homes are found much real labor for the young children to perform?

In addition, craftsmanship also entails attention, accuracy, logic, reason, forethought, the accommodation of effort to given tools, implements and material. It thus favors a harmony between body and mind; it helps to develop a healthy mind in a healthy body.

A great many of the best hospitals and sanatoriums throughout the country use hand-work as one of the most effective means of treating patients suffering from mental and nervous disorders. The patient is encouraged to plan and carry out some activity, preferably a useful one. The agitation and obsessive ideas soon diminish, and improvement, even cure, is speeded up to an appreciable degree.

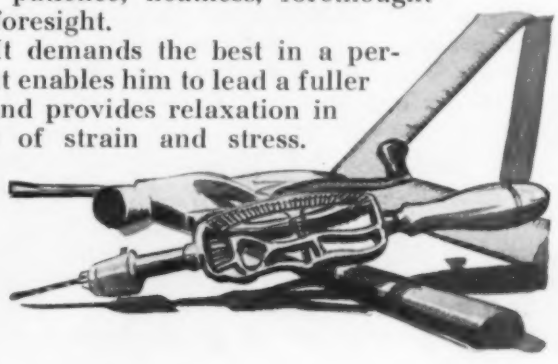
A typical case came under my supervision some time ago. A young lad carried the proverbial chip on his shoulder, lacked confidence in his own ability and was almost ready for a nervous collapse. He had just been adopted into a fine home after having been in more than a dozen so-called homes and finally having slept under back steps until the police took him to shelter. It has been a pleasure to watch the change in this boy's attitude and behavior; this is chiefly due, of course, to his changed environment and to love; but according to his new parents, it may also be attributed in some measure to the confidence gained in making things which are just as good as or better than those made by his new friends and in a new appreciation of his own ability. It has been a means of harmonizing his mental and his physical powers and has given an outlet for his need to be doing, a factor which is one of the chief characteristics of growing creatures.

One of the most obvious defects in the life of the nation today is the deplorable lack of skill in the masses, especially in the pursuits connected with leisure. Many persons now required to do only from six to eight hours of labor are at a loss to know how to employ their leisure. They are missing the proper correlation between hand and brain which might further their development and enhance their value to the community. In the past months I have seen many of the unemployed simply sitting and mulling over their hard luck; some have become insane, and others have committed suicide. It would be far better to have a hobby which could tide them over the rough spots. Much of this skill has been lost since machinery has taken over most of the work of the home craftsman. By means of the handicraft shop, some of the potential skill, which is probably the greatest undeveloped asset in the country at the present time, must be recultivated.

Most persons living in civilized communities today have been reared in a mechanical environment; yet they have lived on a steady diet of books and magazines. A noted lawyer was once heard to say rather braggingly, "I cannot even wind the clock at home." Many persons not only associate the word education with books but confidently assume that no education is possible without them. They forget that the great civilization of a people is expressed in its art, architecture, pottery, sculpture and handiwork or craft. These are the best tests of accuracy and honesty of workmanship, and they are not easily gotten from books.

The benefits of a craft-work hobby may be summarized as follows:

1. It gives a trained eye which will recognize and demand beauty of line and harmony of color.
2. It is a means of making articulate the individual perceptions and ideals.
3. It gives balance to an intellectual person and is a test of accuracy and honesty of workmanship.
4. To the nonintellectual, it gives confidence and a realization that his contribution to his fellow man is just as essential as that of his more gifted fellows.
5. It gives a means of using leisure time satisfactorily.
6. It helps to create a better understanding of the work of the artisan and the laborer.
7. It awakens and cultivates slumbering creative forces.
8. It develops perseverance, industry, exactitude, patience, neatness, forethought and foresight.
9. It demands the best in a person; it enables him to lead a fuller life and provides relaxation in times of strain and stress.



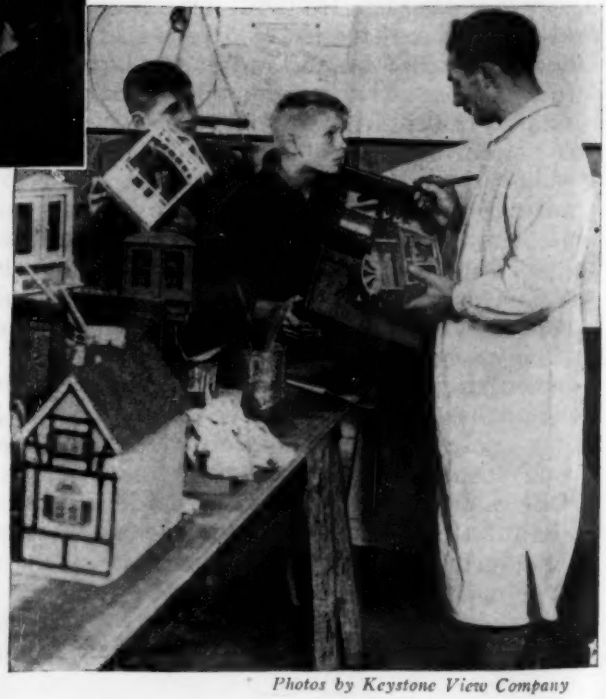
Children of Germany Conduct Toy Project

Boys and girls find enjoyment in reclaiming old toys and repairing them for poor children.

Teddy bears and toy dogs have regained their original state of health since ears have been sewed on and eyes have been restored by the children.

After gaining permission to use a vacant house, these children ventured on the constructive program of making others happy who have been less fortunate.

When eleven little girls set their hearts on renovating a doll house, other little friends are certain to benefit from their thoughtfulness.



The painter in the picture to the right is the only adult assisting these children. He guides them in their work and puts finishing touches on the partially completed objects.

Photos by Keystone View Company

QUELLING THE QUACKS

By Solon R. Barber

Part IV

DENIED THE USE of testimonials, the racket of the fake healer, who is the gangster of the cure-all world, would be nothing but a whisper. The quack must say in his advertisements: "Mrs. S., long a sufferer from cancer" (substitute any other disease), "was cured after carefully following directions for using this miraculous herb" (or tonic, compound, rub, salve or formula). "No one can afford to be without it."

One of the most reprehensible and misleading forms of medicine advertising is the use of testimonials. These may be "unsolicited" or "unpaid for." They may be bona fide. They may be printed long after the writer has died of the disease mentioned in the statement. As a matter of fact, government officials enforcing the federal Food and Drugs Act have found that, in many instances, writers of testimonials were in their graves at the time their letters appeared. Many had died of the diseases which their letters said had yielded to the treatment.

Striking evidence of the misuse of testimonials came to light in a recent trial before the federal court at Baltimore when the government was upheld in the seizure of a liniment labeled as having value in the treatment of numerous maladies, including tuberculosis and pneumonia. The manufacturer of the nostrum, which was based essentially on a horse-liniment formula, had used the testimonial of a woman who claimed to have been cured of tuberculosis through the use of the preparation. The woman died of the disease; but after she became too ill to answer letters which came as a result of her testimonial, her son replied to them over her name.

In a memorandum to the Postmaster General, written some years ago, the Attorney General of the United States said: "Speaking generally, it may be said that in all my experience in this office never has a medical concern, no matter how fraudulent its methods or worthless its treatment, been unable to produce an almost unlimited number of these so-called testimonial letters."

Testimonials may come straight from the heart. They may be written without intent to mislead or defraud. Mrs. A. may be quite sure that she was cured of her trouble through the use of "Doctor" B.'s herb medicine. Doubtless she recovered in spite of the worthless nostrum.

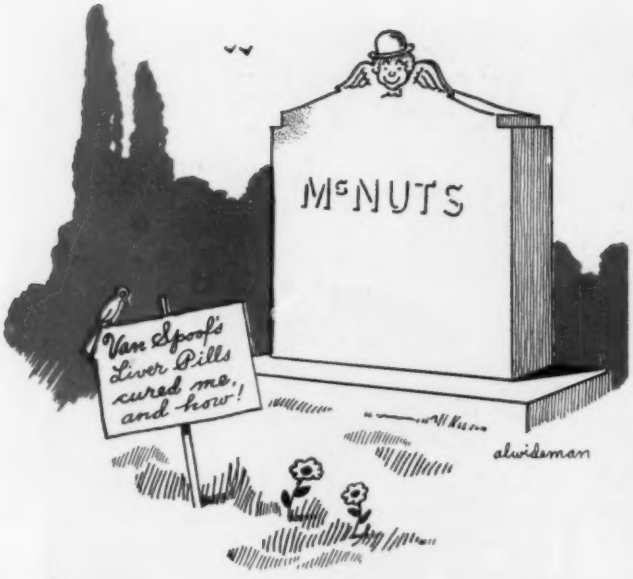
"At 10 minutes after 12 o'clock, not a man, woman or child in this audience will be able to buy a bottle of my gift to man for a million dollars."

Some disorders of the human body correct themselves in time.

Not all testimonials are printed in newspapers or magazines these days. The quack, gone modern, makes extensive use of radio broadcasting in his lucrative job of ballyhooing his nostrums. The federal government and the state governments have little authority over radio broadcasting, but the Federal Radio Commission exercises some control through its power to revoke licenses of stations which broadcast the more flagrant types of misleading radio advertising. This authority is infrequently exercised.

However, whether the fake healer uses the papers or the air to advertise his goods, he invariably depends on what he would fatuously speak of as "psychology." Psychology is a greatly misused word, it is true, but the medical charlatan, whether or not he has a sound, scientific knowledge of the workings of the human mind, certainly does know a great deal about practical "mass psychology."

Some years ago, a typically clever bogus healer was operating in the southern states, particularly in Georgia. This buckboard quack traveled throughout the country, visiting the



In many instances, writers of testimonials are in their graves at the time their letters appear.

smaller towns especially. His methods were extremely sensational. The man knew his customers and grew wealthy. He would visit a town and immediately hire a hall. He would have a runway built out over part of the space given to the audience and would use this in his lectures and merchandising to get closer to the pocketbooks of his prospective purchasers. This shyster advertised his lectures widely.

When he had a good audience, as he almost invariably did, he appeared on the stage in a long black coat. The buttons were made of $20 gold pieces. He affected a long black beard and an impressive manner. All dressed up, our friend would deliver a pseudoscientific lecture on the cure and prevention of disease; he specialized in maladies which were prevalent in the region at the time of his visit. Malaria was one such specialty. The nostrum he sold, completely worthless, was composed of cheap, ordinary ingredients. He put it up in bottles of various colors and shapes, labeled for scores of diseases.

Toward the conclusion of the "lecture," the "professor" impressively motioned his apprentice to come out from the wings. The boy would appear, carrying baskets of the worthless remedy. The friend-to-man would unbutton his long frock coat, take out a heavy gold watch and walk down over the runway. The boy followed. Looking intently at the assembled sufferers or would-be sufferers, the quack would glance at his watch, point a finger impressively, and announce heavily: "It is now just 10 minutes to 12 o'clock. I will put my valuable remedy, made from secret formulae handed down to me by Chief Wind-in-the-Sky (now deceased), on sale at precisely 5 minutes to 12 o'clock. At 10 minutes after 12 o'clock, not a man, woman or child in this audience will be able to buy a bottle of my gift to man for a million dollars. The medicine sells for $1 a bottle. Here, boy! The bottles!"

While the people gasped, the hawker waited in deep silence. At the precise point when the face of his watch indicated 5 minutes to 12, he began dealing out the bear oil. Regardless of whether or not he sold out at 10 minutes after 12, he abruptly stopped sales, ordered the boy to take the remainder of the stock out of the building and announced that he was through for the day. Usually he would declare that there would be another sale at a certain hour next day, if he thought the traffic would stand up. If business was not good, he shook the dust of the town off his feet.

This is one of the cleverest uses of mass psychology that has ever come to my attention.

Medical testimonials, as commonly understood, are almost always worthless. The reading of what purports to be a personal statement, reporting beneficial results from taking this or that "patent medicine," has a powerful effect in persuading many sick people to buy the article. Testimonials, as used by fake healers, are employed for one purpose and one purpose only, and that is to boost sales. The corn doctor is not interested in the health or the welfare of his purchasers. Some testimonials, as I have said, are bona fide, honest and unsolicited; but many are purchased with money or with supplies of the nostrum. One testimonial giver will take money, another a two-pants suit and still another a supply of her own pictures. Some vain persons give testimonials because they like to see their pictures in the papers.

There are a few testimonials which are given with honest intent. Many persons are disposed to believe that if they get well, after adopting a particular measure, the method adopted is responsible for their recovery. The early Romans had a word for it: "post hoc, ergo propter hoc," which literally means, "after this, therefore because of this." Doubtless many honest testimonials are based on faulty reasoning of this kind.

Suppose a woman is suffering from a headache. Headaches are caused by numerous human disorders, and Mrs. Jones' headache may be due to digestive troubles, whereas Mrs. Smith's may be caused by defective eyesight. Mrs. Jones takes Professor So-and-so's bear-oil remedy, recommended for headaches, as well as for cancer, tuberculosis and leprosy. She is miraculously cured. The nostrum doubtless had nothing to do with it. Thinking that the "remedy" cured her, and naturally being duly grateful, she writes a testimonial for Professor So-and-so, declaring that his remedy is invaluable, that it is infallible in the treatment of headaches. Mrs. Smith and her thousands of sister sufferers probably purchase some of the Professor's nostrum. Their headaches rise out

of a score of different causes, and the likelihood that the fake medicine will cure the pain is extremely slim. But the sales have been made, and the profits have been put in the bank. Unfortunately there is no law which effectively prevents a fake healer from getting away with this sculduggery.

Patients suffering from some diseases feel better at one time during the progress of the disease than at others. For example, a tuberculous patient frequently feels so greatly improved that he considers his disease cured. Such an experience on the part of one who is taking medicine may readily result in a testimonial for the medicine. But the Federal Food and Drug Administration has on file numerous death certificates of writers of testimonials for would-be remedies, some of which were recommended for tuberculosis, showing that disease and others as the causes of death. It will readily be appreciated, therefore, that little confidence can be placed in most testimonials.

Writing in the New York *Herald Tribune*, Feb. 21, 1915, Samuel Hopkins Adams, strenuous debunker, said that the prospective buyer of a "patent medicine," recommended by some testimonial writer, should ask himself three questions before buying: 1. Who gives the testimonial? 2. What does he say? 3. Why does he say it?

The testimonial giver is generally unknown save to those persons living in his immediate neighborhood, and often he is not known even to them. Sometimes names and addresses are faked. The corn doctor will go to the extent even of faking names and titles of supposed "specialists" who are claimed to recommend the nostrum. A favorite trick these days is to use the names and pictures of "specialists" living in foreign lands. The chances of the patient's checking up on the reputations of the experts mentioned are extremely small. This racket is frequently played in the advertising of manufacturers of so-called glandular preparations, laxatives, and tonics.

What the testimonial giver says is of little importance, in my opinion, because the average layman who furnishes the testimonial is completely unable to diagnose his trouble. He may say that he gained 5 pounds in two days, that his trouble completely disappeared, or that after using the treatment for a certain length of time he was able to get up from his bed and walk. A testimonial from a skilled physician as to the therapeutic effects of a certain remedy would be valuable because the physician has made a long study of the causes and nature of disease and is able to state his opinions and observations authoritatively. This is not true, however, of a person who is untrained in the practices and principles of medicine. The prospective buyer of a bear-oil medical preparation should understand this fact.

I have already explained why the testimonial writer gives his statement to the manufacturer. Money, a supply of photographs, a dozen bottles of the medical preparation, or the honest belief that he was benefited may have prompted him. It is difficult, if not impossible, for the reader of a testimonial to weigh accurately the reasons why the recommendation was written. Therefore, beware!

Manufacturers of "patent medicines" are always eager to use the names of famous people. A well known opera singer, who did not have any knowledge of medicine, is known to have sold her name for the endorsement of a fake remedy. Medical associations, the Federal Food and Drug Administration, and state and city health organizations have on file scores of testimonials of this type. Tonics, laxatives and cosmetics as well as fake remedies for dozens of diseases have been extensively advertised in the American press under the names and the pictures of famous persons. Movie stars, athletes, football coaches and even scientists have permitted their names to be used in the "patent medicine" manufacturer's advertising ballyhoo.

By far the greatest number of all testimonials have been used in advertising completely worthless nostrums. The reputable manufacturer of medicines, producing a product which has genuine worth in the treatment of disease, does not resort to fake testimonials.

The purpose of this article is to warn the ill against the purchase of medical preparations

One testimonial giver will take money, another a two-pants suit and still another a supply of her own pictures.

which are flagrantly advertised or which are sold largely through the recommendation of testimonial givers, professional or amateur.

The buyer has some protection. Enforcement of the national Food and Drugs Act helps to safeguard him against the sale of fake medicines, but its authority is restricted to interstate and foreign commerce in medical preparations which are falsely and fraudulently labeled, and it is further restricted to the claims made on or in the trade package. It does not have any jurisdiction over claims made in newspapers, on bill-boards or over the radio. The purpose of the law, as written, is direct and plain. It condemns every fraudulent statement, design or device, made on or in the trade package, that may mislead or deceive. Manufacturers of fake medicines are restrained from printing on their labels or in circulars accompanying the goods any fraudulent remedial claims for a drug or a medicine. A careful reading of the label, therefore, will help the purchaser to determine whether or not the preparation he has in mind will be of benefit in the treatment of his ailment. One must bear in mind, however, that the jurisdiction of the federal Food and Drugs Act is limited to interstate and foreign commerce in foods and drugs. The law does not have any authority over intrastate sale of such products.

Hygeia Keeps Pace with

A CENTURY OF PROGRESS IN MEDICINE

The June issue will bring the following indications of that progress:

The century brought the airplane; and medicine, quick to see the possibilities of its use in alleviating the sufferings of mankind, adapted it to this purpose. "In emergencies, when a life hangs in the balance, and minutes mean the difference between recovery and death, the military airplane has brought medical aid which by any other means would have arrived too late." In the thrilling incidents of "Wings of Mercy," *H. Latanté Lewis II* shows how the U. S. Army Air Corps has repeatedly demonstrated its never failing readiness to render prompt aid to those in distress.

The century brought also the radio and, as a by-product, the radio gymnasium class. *Alfred C. Boand,* who has had much practical experience as instructor of radio gymnasium classes, gives the "inside story" of the development of this new exponent of exercise.

"A human repair shop" is the graphic appellation given to "The Modern Hospital" by *Dr. J. H. J. Upham,* who enumerates the influential factors in its evolution.

Dental science also keeps pace with progress. *Francis F. Smith, D.D.S.,* gives some interesting and some amusing sidelights on the dentist's office and tells what the dentist sees as the patient responds to the request, "Open Wider, Please."

The science of pediatrics has progressed almost immeasurably; yet the age-old question, "What will that little rascal do next?" still defies the sharpest minds. In the current issue, *Dr. W. Gaylord Graves* discusses the problem of "Making the Cradle Safer for Infancy"; in the June issue he proceeds to a consideration of "First Aid for Children," in which it is once more demonstrated that an ounce of prevention is worth a pound of cure, and that first aid can, strangely enough, be rendered before an accident has had a chance to happen.

Improvement in methods of preserving foods has advanced with seven-league boots, and adequate refrigeration has proved an invaluable safeguard of health. *Doris W. McCray* describes in detail the work accomplished by the "Guardian of the Family Health."

Pictures and descriptive material will bring *Hygeia* readers a preview of the American Medical Association exhibit at A Century of Progress, the international exposition which is to be held in Chicago this summer.

And what of the men who have helped to make the progress of medicine possible and whose daily existence forms chapters of living sacrifice in the history of the century? In reading *Florence C. Johnston's* "All in a Day," we share in the surgeon's mental review of the day and live through with him the moments of tense anxiety and the hours of nerve, soul and body wracking endeavor, until at last, "The surgeon put down the last scalpel. It had been a long, hard day. In anticipation of a pleasant evening at home, he could almost sense the relaxation of his hot bath and the getting into his dinner clothes"—an anticipation that did not culuminate in realization.

A Breast Milk Dairy

By

Mary D. Blankenhorn

AN EXPERIMENT in collecting and supplying breast milk to mothers outside of a hospital was started in Boston in 1910. Three years later at Bellevue Hospital in New York City a like project began, with the cooperation of that hospital's social service department. In 1921 the Children's Welfare Federation of New York City, a federation of 223 child health agencies, began the collection, pooling, pasteurization and distribution of human milk. They have demonstrated that mothers can be found who are perfectly willing to sell their milk, that certain of these mothers can spare a portion of their milk without detriment to their own babies, that human milk can be thus furnished at a reasonable price and that the collection can be made economically, to suit the convenience of the producing mothers as well as of the consuming infants.

Only mothers who have more milk than is needed by their own babies are allowed to sell their milk to the federation. They must be under the care of a physician and nurse in a baby health station. The mother's baby must show a normal weekly gain in weight. Should a loss of weight occur, the mother must dis-

Herbert Photos, Inc.

continue selling her milk until her own baby is normal once more.

Twelve cents an ounce is paid to the forty or fifty women who come in daily to the federation's bureau. Each mother gives on the average 10 ounces a day; each sits in a screened booth and is visible only to the matron who watches and advises during the process of milking or "expressing" the milk. Machines are never used, but the mothers are taught to manipulate their breasts with their fingers. So skilful are some of them that 16 ounces in thirty minutes is possible, but the average woman takes about fifty minutes to express 12 ounces.

This milk is pooled, pasteurized and iced, and is given out only on a doctor's order. So precious is it that it goes only to the most desperate cases to save the life of a sick or a premature baby. In this way the federation feeds twenty or more babies every day, some of them needing only a few ounces to mix with cow's milk for a period of ten days or less; others must be supplied for two or three months. Since this human milk is almost always ordered only as a last resort, it is amazing to examine the federation's records, which show that from 80 to 88 per cent of these "adopted" babies have survived because they were able to digest this milk.

In 1931, 3,041 quarts of mothers' milk were collected and distributed at the federation's headquarters; in addition to ward infants in three hospitals, 460 premature and sick babies were supplied with the milk.

This milk of human mothers is sold at 30 cents an ounce except in those cases in which the presence of destitution forbids its purchase. Last year 360 quarts were given away, and about as much was sold at a greatly reduced price to those able to pay only a few cents an ounce for the precious fluid.

Mary Arnold, executive secretary of the Children's Welfare Federation, declares that this year, as never before, there are many parents who ask to be allowed to pay for the milk on the installment plan. "They do not want charity," said Miss Arnold, "and in order to respect this feeling we arrange to carry the accounts, knowing of course that almost always we must charge these costs off to bad debts at the end of the year. If we had greater resources, we could reach more mothers who are anxious to sell their surplus milk and many more babies to whom it would literally mean salvation. Ten dollars' worth of this life-giving fluid will often carry a sick or a premature infant through the crisis and start him on the road to good health."

It may indeed be said that this milk blesses those who give as well as those who receive. These generous mothers are paid by check every week, and in many cases they earn an income which makes the difference between comfort and penury in their own families. One healthy young Italian mother earned $987.88 in one year. Another mother, 26 years old, had three children in four years. She nursed them all, and each was a picture of health. During the four years she sold to the federation 400 quarts of her extra milk, which netted her an income of more than $1,700. Another mother frequently gave 40 ounces a day over a period of eleven months.

It has been found that women can prolong lactation into the fifteenth and even the eighteenth month. Strange to say, the composition of the milk varies but little from the earlier to the later period.

One of the happiest results arising from the establishment of this human dairy by the federation is the number of cases in which the mother's own baby has been benefited by her generous action. Again and again, the baby has been improved after the mother has been relieved of her surplus milk. Often it is hard at first to persuade mothers who have an extra supply that their babies will be completely protected. Often their husbands are inclined to object. But in spite of these difficulties, an increasing number of women are returning to the agencies of the Children's Welfare Federation after the birth of successive babies and asking to be allowed to give or sell from their abundance to those whose need is so acute.

The Diet of the Two to Five Year Old

Ewing Galloway

By *Marian Breckenridge*

"FOOD for the young child is a serious business upon which his whole progress in life largely depends," writes Mary S. Rose. The child of 2 to 5 years is growing rapidly. He is gaining about 5 pounds a year in weight, and about 1½ inches in height. Foods supply him with the materials for this growth and also with material for maintenance to keep him warm, to provide for the proper functioning of all parts of his body and to give him energy for his activity.

During this period the young child acquires many habits which he will carry through life; among these are food habits, both likes and dislikes. Now is the time to teach him to like desirable foods and to develop habits of regularity and proper mastication. Growth, maintenance and the formation of proper food habits must all be considered in the child's diet.

A balanced diet, either for the adult or for the young child, is one providing a sufficient quantity of protein, carbohydrate, fat, minerals, vitamins, water and laxative foods. Protein is a necessary part of the tissues of the body, especially of the muscles and bones. Carbohydrates (sugars and starches) together with fat furnish energy for the muscles. Of the minerals, calcium, phosphorus and iron are the most important. Calcium and phosphorus are needed for bone development, and iron plays an important rôle in the blood. The vitamins are essential for both health and growth. Laxative foods are necessary to stimulate regular elimination, and water must be supplied to replace the daily loss from the body and to help in the digestion of food.

If the child has milk, eggs, cereals, vegetables and fruits in sufficient amounts, these requirements will be met. His diet should include:

1. One quart of milk daily. This amount will provide protein, the necessary calcium and phosphorus, and some of the vitamins.

2. An egg daily. It may be served alone or in some other food. The egg provides protein, of a kind used by the body to promote growth; it is also of special value because of the iron and vitamins in the yolk.

3. A small amount of meat, approximately 3 tablespoonfuls, about twice a week. Liver, kidney, sweetbreads, brains, beef, lamb and chicken can be used. Meat adds more protein to the diet and has a high flavor which makes the meal palatable.

4. Vegetables and fruits daily. These provide vitamins, minerals and the laxative factor. The child should have two cooked vegetables (one of which should be a green vegetable), one raw vegetable, one raw fruit and one cooked fruit during the day.

A large variety of vegetables may be served, including spinach, cabbage, cauliflower, celery, carrots, beets, turnips, onions, squash, peas, beans, tomatoes, asparagus and potatoes. Sandwiches made of chopped raw vegetables appeal to the child. A piece of celery or carrot or a

small leaf of cabbage will give the child practice in chewing and acquaint him with the flavor of raw foods.

A large variety of fruits is available for the child. These include orange, apple, banana, peach, pear, pineapple, prunes and apricots.

The child may be given from 2 to 6 tablespoonfuls of vegetable or fruit in a serving, depending on his age and the familiarity of the food.

5. Cereals once or possibly twice daily, preferably the whole-grain cereals, to supply more minerals and vitamins. A child will eat from 4 to 8 tablespoonfuls, served with milk.

6. Whole wheat bread at each meal, with butter. It may also be toasted and spread with butter, or served as a sandwich. One scant teaspoonful of butter for each slice of bread is sufficient.

7. Cod liver oil, to provide necessary vitamins. According to Dr. McCollum, ½ teaspoonful daily is sufficient at this age. It can be given after a meal or in the middle of the morning with orange or tomato juice.

8. Two cups of water daily to be taken between meals.

The suggested menus accompanying this article are planned for three days. The dinners have been selected from those served to nursery school children at the Merrill-Palmer School, and the breakfasts and suppers, which supplement the dinners to make up the child's daily food requirement, have been planned from foods recommended to the parents. It is not necessary to prepare the children's meals separately. Family menus can be so planned that they will include foods the young child can eat.

The preparation and serving of children's food is just as important as its selection. Spinach, for example, can look fresh and green after it is cooked; or, on the other hand, it may assume an unappetizing, brownish green hue, depending on the method of preparation. No one can expect a child to learn to like spinach that is disagreeable to sight and taste. Spinach and other leafy vegetables are both palatable and healthful if they are placed in boiling water and cooked for about seven minutes. Other vegetables require about twenty minutes.

Food for children should be prepared simply; it should be boiled, baked or broiled. Creamed vegetables and creamed soups offer variety and a way to utilize part of the daily milk requirement. Cream tapioca, chocolate pudding, junket and custards are favorites with small children. Foods need not be highly seasoned to be palatable. Salt and pepper and sugar should be used sparingly. Frequently the flavor of a food is improved if sugar is sparingly used; prunes, for instance, have a better flavor when they are cooked with lemon and without sugar. The desire and taste for sugar become a habit which should be discouraged, since sweets satisfy the appetite and thus supplant other foods.

Suggested Menus

BREAKFAST

Prunes, 2-4 tablespoonfuls
Cereal, 4-8 tablespoonfuls; with milk, 4-6 tablespoonfuls
Whole wheat toast with butter, 1 slice
Milk, 1 cup

DINNER

Broiled liver, ground or diced, 3 tablespoonfuls
Creamed carrots, 2-6 tablespoonfuls
Cabbage sandwich
Diced apple with orange juice, 2-6 tablespoonfuls
Milk, ⅔ cup

SUPPER

Buttered beans, ⅓-½ cup
Whole wheat bread with butter, 1 slice
Floating Island, ⅓ cup
Milk, ¾ cup

BREAKFAST

Juice of 1 orange
Cereal, 4-8 tablespoonfuls, with milk, 4-6 tablespoonfuls
Whole wheat toast with butter, 1 slice
Milk, 1 cup

DINNER

Vegetable soup, ½-¾ cup
Escalloped potato, 2-6 tablespoonfuls
Egg yolk sandwich
Apricot whip, 2-6 tablespoonfuls
Milk, ⅔ cup

SUPPER

Beets, ⅓-½ cup
Lettuce sandwich
Cream tapioca with peaches, 2-6 tablespoonfuls
Milk, ⅔-1 cup

BREAKFAST

Baked apple
Oatmeal, 4-8 tablespoonfuls, with milk, 4-6 tablespoonfuls
Whole wheat bread with butter, 1 slice
Milk, 1 cup

DINNER

Eggs à la goldenrod, ⅓ cup
Buttered spinach, 2-6 tablespoonfuls
Celery, 1 piece
Carrot sandwich
Seedless grapes, 2-6 tablespoonfuls
Milk, ⅔ cup

SUPPER

Cream of tomato soup, ½-¾ cup
Whole wheat bread with butter, 1 slice
Rice-raisin pudding, 2-6 tablespoonfuls
Milk, ⅔-1 cup

ADDITIONAL SUGGESTIONS

½ teaspoonful of cod liver oil may be given daily either at the end of a meal or in the mid-morning with tomato or orange juice.
⅔ cup of milk may be given in the mid-afternoon.

[NOTE.—In the foregoing menus, cupfuls are measured by the standard measuring cup; tablespoon and teaspoon measurements are level; sandwiches consist of ½ slice of whole wheat bread, ½ teaspoonful of butter and 2 tablespoonfuls of filling.]

When you select the child's food for the day, consider its color and consistency. Color adds to the attractiveness of the meal, and varied consistency in the foods sometimes determines the success or failure of the meal. If there are several "chewy" foods, like broiled liver, baked potato and celery, the meal may be a failure because the child becomes fatigued from chewing. Some persons have found that slippery foods are unpopular; certainly a combination of coddled eggs, creamed onions and diced tomatoes in one meal would be unwise.

While it is a good thing to broaden the child's experience of foods by giving him a variety both in kind and in consistency, it is important to proceed slowly in introducing new foods. Begin with small amounts and introduce only one new food at a time; start with a teaspoonful, increase it to two the next time, and continue increasing the amount until the child is receiving an adequate portion. After he is accustomed to one new food, begin with another, remembering, as Mary S. Rose writes in "The Foundations of Nutrition," that "new foods are new lessons to be learned."

Begin to give your child the right foods when he is still a baby and build up a desirable attitude toward them. It will not be long before he demands the foods that are good for him, like the little boy who, after having whole wheat bread at nursery school for the first time, asked for "his bread" at home.

LAYS FOR LOVING PARENTS (By One)

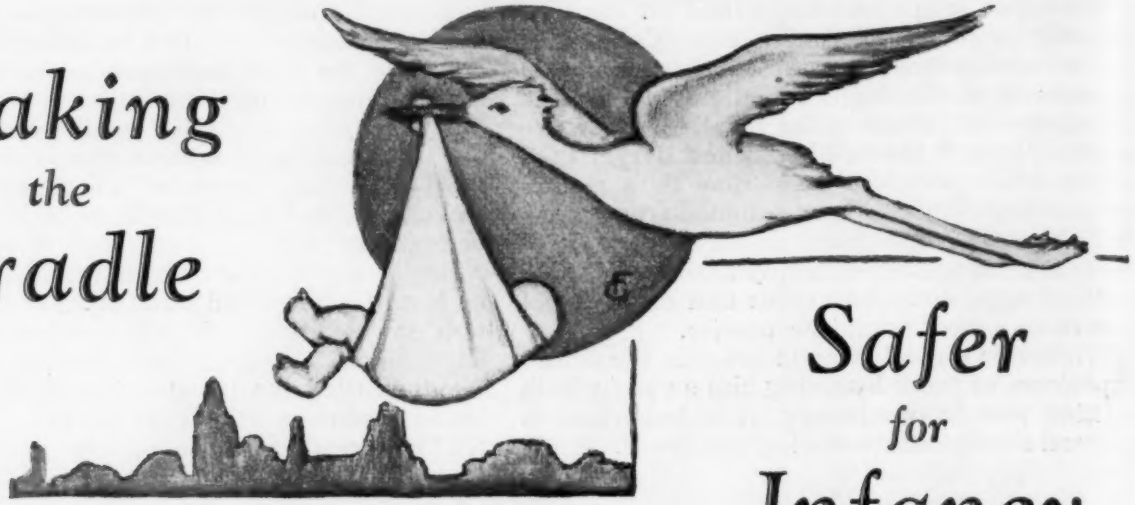
IV. Worship

When Mother takes the boy upstairs,
He kneels and says his baby prayers
And bows his head in reverent style
And laughs and chuckles all the while.

But God, I think, won't take amiss
A laughing baby prayer like this.

—Berton Braley.

Making the Cradle Safer for Infancy



By GAYLORD W. GRAVES

THE TITLE of this article is not intended to suggest that cribs should be equipped with shock absorbers or that bassinets should have guard rails. As the traditional symbol of early environment, the cradle stands for the baby's world, an uphill kind of realm which gradually is being made easier to traverse but is by no means free from the important factor of risk.

Cutting down the hazards of infancy, unlike the simpler business of lowering the insurance risk of a later age period, is peculiarly difficult because after the novelty of his presence has worn off, the helpless new-born child is often expected to be supervised by telephone with efficiency of control approaching that of an electrically regulated clock. And this attitude is frequently maintained despite the fundamental fact that the dangers which may unbalance progress in the early months are so manifold and so menacing that the first birthday anniversary of the average youngster might well partake of the dignity of a veteran's homecoming celebration.

Actually the chances of a soldier in ordinary warfare have been computed to be far better than those of the average infant in the average environment.

The fact that the falling death rate under 1 year in the United States is still about five and one-half times the death rate for the population as a whole, coupled with the significant fact that more than half the deaths of the first year occur in the first month, sufficiently emphasizes the precarious status of infancy.

Commissioner Wynne of the New York City Health Department has called attention to the Japanese custom of counting a baby's age from a point of time nine months before birth. In this prenatal period, rather than later, any consistent program for making cradle existence safer should commence.

Why should so many human beings weigh 4 or 5 pounds at birth instead of 7 or 8? Why should hereditary but preventable disease mark so many new arrivals? Why should developing bones and teeth so frequently be found deficient in the essential mineral elements that the mother's food should help to provide? And why, in spite of proof that under fair conditions most modern mothers can adequately nurse their offspring in the crucial early weeks, is breast milk one of the luxuries of early existence?

Little Junior may not at the outset call for the kind of first aid one associates with battlegrounds, beaches, football fields and fires; but if he is typical of the usual cradle inhabitant, he deserves prenatal aid of no less importance.

One in every four deaths in the first year is due to premature birth. One in every twenty-four is due to congenital weakness. Nearly one fourth of the deaths under 1 year occur under the age of 1 day. One in every fourteen deaths under 1 year is ascribed to injury at birth, injury which in many instances might have been prevented by an early understanding. In the face of such shortcomings, the human race is indeed fortunate in that its traditional friend, the stork, is too wise and dependable an old bird voluntarily to get into unfamiliar territory or to do stunt flights.

Following his arrival it is the new baby's privilege to make the acquaintance of his relatives (and their favorite germs) in small groups. He should be given time to toughen his skin and mucous membranes normally before being subjected to useless mouth washing, nose prodding and promiscuous handling. Figuratively and literally he deserves not to be sneezed at. And he certainly ought not to be a subject for surgery in the first week of life when hemorrhage of the new-born is most frequent. Keeping both feet in the cradle is vastly more important than being born.

Paradoxically the new arrival's worst foes actually are those of his own household: Job's comforters who cannot await the normal development of a breast milk supply; mathematicians with charts of other babies and unimpeachable weighing appliances; accusers misinterpreting beneficent yelling as colic; talcum powder advocates with the deadly can of stearate of zinc, one good whiff of which has been known to cause fatal pneumonia; amateur sore-eye authorities without knowledge of blindness of the new-born; sun-worshipers with no respect for wind and dust; fresh air enthusiasts who are otherwise truly commendable but who are without conception of the possibilities of modern ventilation and room temperature, to say nothing of food experts with no appreciation of the freight-handling rules of a stomach or the capacity thereof. Far more thrilling than that inspiring American narrative, "Up from the City's Streets" is poor little Junior's epic, "Up through the First Three Weeks."

It is particularly during this early period, before he can qualify to eat "an apple a day," that an individual is entitled to periodic visits from a physician. If first acquaintanceship promises to ripen into mutual understanding, meetings between baby and doctor should be permitted once a week during the first month of the infant's life, then every two weeks until the end of the third month, and thereafter once a month for the remainder of the first year. This scheme is economical in the long run, and, to say the least, it results in greatly increased security.

Making a creditable record from the cradle to the grave would be easier if just around the corner were not constantly lurking that red-handed gang leader, the tubercle bacillus. In the face of such an acquaintance, what can a child do for himself in the first two years of life? How will a child at 5 years of age react to this enemy? What, anyhow, is childhood tuberculosis?

If one asks such questions of the Tuberculosis and Health Association, one will probably receive the following answer: If during his first year a baby receives unintentional but massive doses of tubercle bacilli from his mother, his father, his grandparent or the innocent but infected girl in the kitchen who prepares his food, he will probably never survive to worry about infantile paralysis; if, however, the initial encounter with tuberculosis can be postponed to late childhood, the attacked subject will, under sensible care, probably grow up strong and robust and eventually show only by the tuberculin test that he has had this infection. To make the cradle safer for infancy one should ascertain whether persistent coughs are due only to the wrong brand of cigaret or, perhaps, to the great white plague itself.

The mere recital of some of the dangers of infancy suggests the cure for many others of similar nature. Nevertheless, aggression is indicated.

If the recent list of 55,000 cases of smallpox reported in the United States for one year is to be materially reduced, all well children should be vaccinated in infancy. If the falling diphtheria incidence is to be further reduced, parents must consistently not defer beyond the period of infancy the simple immunization which has been perfected to meet this deadly disease.

Bewailing the taste and odor of cod liver oil will not safeguard infants against rickets. If the baby with fair digestion does not receive his rightful daily quota of this protective substance, particularly during the winter months, the failure (no matter whose fault) is the baby's misfortune. To paraphrase, somewhat ungrammatically, for the sake of emphasis, "All is not bowlegs that's rickets."

If babies, like new automobiles, arrived with a guarantee, possibly humanity would be in a better state. Yet how about the terms of a guarantee, even for the rare sample of mankind derived from perfect stock? Would not such a stipulation call for careful steering, tested fuel, cross-traffic observance and regular servicing, particularly during the breaking-in period, the cradle period?

When "the hand that rocks the cradle" has made it safer for infancy, the secondary business of ruling the world will not be so difficult.

Shortness of Breath

By MAURICE S. JACOBS

SHORTNESS of breath is a common complaint that frequently brings the patient to the doctor. Often this complaint is not real; but the false impressions associated with it give rise to misapprehensions. The sighing type of breathing is often described, erroneously, as shortness of breath.

Long, deep, sighing breathing is seen frequently in persons who have absolutely no disease of the heart or lungs. It is common in persons who experience nervousness, worry, fatigue or undue mental strain, and is frequently present in women who lead more or less sedentary lives, who take little or no exercise and who are indoors a great deal.

Under these circumstances their regular breathing is shallow, so that during the course of a minute, they breathe only twelve or fourteen times. Because of this shallow breathing, insufficient air gets into the lungs, so that there comes a time when more air is needed. Nature responds to this need by means of a long, deep breath. This breath, which the patient claims to be the short one, is, as a matter of fact, the deepest and most healthful one that the patient has taken.

Associated with it there is often a sticking type of pain which may be felt around the heart. This makes the patient feel even more strongly that something is wrong with the heart. As a matter of fact, rarely is any heart trouble found in these cases. Occasionally, patients are seen who have been in bed intermittently for several months because of supposed heart trouble. It takes only a brief examination with the stethoscope to determine that no actual heart trouble exists, that fundamentally the patient is of a nervous type and that the so-called shortness of breath is really a deep, sighing breathing superinduced by an unstable nervous system. Although this is observed most commonly in women, it is also seen in men. During the Great War many men were found who had such complaints, and the condition was ascribed to "soldier's heart" or "irritable heart." Since then many doctors have come to realize that it is seen perhaps just as frequently in civil life.

The real shortness of breath may be divided into two classes: (1) a class which is termed physiologic or normal and (2) a pathologic or abnormal class.

When one runs a race or engages in any active physical exercise, such as playing tennis or handball, one finds oneself breathing more rapidly than when one is at rest. That is exactly as it should be. The exercise makes the heart beat faster; more air is needed to be carried to the tissues through the blood, and Nature responds by making one breathe faster. When, however, without having done any unusual exercise it becomes necessary to breathe faster than is normal, the condition may be classed as abnormal and is a sign that something is not as it should be.

The normal rate of respiration is between 15 and 20 a minute; the latter figure is an average for active women. When one is at complete rest, this figure drops to about from 14 to 18, and during sleep it is even less.

When one finds that one's respirations are beginning to be a little hurried or that engaging in mild exertion like going up the stairs causes the breathing to be more rapid, it becomes necessary to investigate, in order to see whether anything is wrong with the heart, lungs or kidneys to account for it.

Abnormal shortness of breath, or dyspnea, may be due to various factors. Any of the acute illnesses, such as tonsillitis, grip, bronchitis or pneumonia, may be present. There may be obstruction in the upper air passages; that is, in the nose, the larynx or the trachea. There may be trouble in the bronchial tubes or the lungs, resulting from foreign bodies, tumors or abscess. The blood may be insufficient in amount or in quality, or there may be infection in the blood stream. The trouble may be in the kidneys, in the heart or in the blood vessels. Other infections or toxic influences such as goiter may likewise cause shortness of breath.

Many persons are of the opinion that shortness of breath means heart disease and that all heart disease manifests itself by this symptom. This is true to a great extent; yet there are many persons who have some form of heart disease who are not short of breath except under active exercise.

Briefly, heart disease may be divided into three groups: (1) congenital heart disease, the kind that is present at birth; (2) infectious heart disease, which follows rheumatic fever, St. Vitus' dance, frequent tonsillitis and other acute diseases, and (3) degenerative, the type that appears later in life and is first seen about the age of 50.

In the congenital form the child is usually blue around the lips and fingers. Such children may live for some years in comparative comfort; their breathing will be more hurried than is normal, but if they do not take unusual

exercise, they themselves may not be conscious of shortness of breath.

Such patients easily become winded, but they recover after a short rest and go about their activities slowly and in fairly good condition.

In the infectious form, the heart becomes affected following any one of the diseases already mentioned. Shortness of breath may manifest itself early, although it is not at all unusual for the original disease, such as rheumatic fever, to complete its course and leave a damaged heart, and the patient may not know anything about it for several years to come. Such cases are seen almost every day. Two of the first signs may be a little difficulty in catching the breath and a feeling of throbbing around the heart, so-called palpitation, which clears up after rest. If this is diagnosed early, a great deal can be done to prevent further damage to the heart by the judicious use of rest, fresh air and moderated exercise.

The third form, which appears in the prime of life, is the one that claims more attention each year; it is indeed this group which has caused the increased mortality in heart disease in this country during the past few decades. One of the most important of the several factors that enter into this condition is hardening of the arteries, or arteriosclerosis. This disease is often associated with high blood pressure. If, in addition, there is any tendency to overweight, an additional burden is thrown on the heart.

A patient with this condition may find himself more or less gradually unable to walk quite as far or as fast as formerly without an annoying shortness of breath. He has difficulty walking up steps and often must stop several times to "catch his breath." If, in addition to this, there is a sense of suffocation or constriction in the throat or actual pain around the heart, there is no question that some degree of heart disease is present. It is needless to say that when stair climbing causes any degree of breathlessness, it should be avoided as much as possible, and medical advice should be sought.

Now as to high blood pressure. This is frequently, though not always, associated with some disturbance of the heart. If it lasts long enough, it will always affect the heart, at least causing it to become enlarged. Here again, shortness of breath may be an early sign and lead to a physical examination which will reveal the trouble. Frequently patients first consult a physician following a sudden attack of dyspnea which is experienced for the first time on running to catch a train. If such a patient has always been active in business, this new experience distresses him, and he wisely seeks counsel. The only abnormal thing found may be high blood pressure. If all patients would consult their family physicians early and regularly, a great deal of the permanent damage done to the heart could be avoided.

Overweight frequently causes a noticeable degree of shortness of breath, even in cases in which no actual disease of the heart exists. In cases of extreme obesity, as it is called, there actually is an excess of fat around the heart and in the heart muscle, which naturally cuts down its efficiency. When this condition arises, rapid breathing results.

Arteriosclerosis, or hardening of the arteries, belongs to the same category in causing dyspnea. In persons past middle life, the tiny blood vessels that feed the heart muscle itself become roughened and calcified, the blood does not circulate properly, and the heart muscle becomes damaged. This may show itself for the first time by shortness of breath; it is a warning that one is not well.

Consumption, or tuberculosis of the lungs, may be associated with shortness of breath. In the early stages, however, this may be so slight as to occur only after exertion. As the disease progresses, the shortness of breath becomes more noticeable. Besides tuberculosis, slowly developing pleurisy, especially if it is associated with fluid in the chest, may show itself only by an increasing degree of difficulty in breathing. For quite a long while, tumors of the lung, such as cancer, may not give any evidence of themselves beyond a restriction in the breathing.

A severe form of shortness of breath is seen in asthma. This type of shortness of breath is spasmodic

GRAHAM HUNTER '32
MRS. BULLWINKLE WILL TELL YOU THAT SHE IS FOLLOWING DOCTOR'S ORDERS ABOUT PRESERVING HER FIGURE —— "DIETARY CHANGES AND OUTDOOR EXERCISE," HE SAID. WELL, OF COURSE GEORGE IS DOING THE EXERCISING THIS MORNING, BUT ONE DOES GET SO OUT OF BREATH WALKING TWO BLOCKS!
THE BON BONS? OH WELL, ONE CAN'T BREAK A HABIT ALL OF A SUDDEN; ONE MUST TAPER OFF. MRS. BULLWINKLE HAS JUST TAPERED OFF HALF A POUND OF SOFT CENTERS. AFTER ALL, A WOMAN MUST LIVE....
BUT TOMORROW!—— TOMORROW SHE'LL START IN EARNEST; THAT IS, IF IT'S A NICE DAY AND SHE FEELS LIKE IT AND EVERYTHING.

and appears in so-called attacks. It is well to keep in mind that the so-called cardiac asthma is not asthma but a form of heart disease and should be treated as such. This often comes on only at night and is an early sign of failing heart.

Disease of the kidneys, or nephritis, is frequently referred to as Bright's disease. Even in the moderately advanced form it may not show itself by any means other than tiredness and shortness of breath. It is often associated with high blood pressure and hardening of the arteries. All these abnormalities can be revealed by a periodic check-up of the system.

In conclusion it may be said that shortness of breath is normal under certain circumstances. It is not present in many of the instances in which patients think they have it. However, when it is actually present under the circumstances already mentioned, it is a sign of trouble somewhere, and a physician should be consulted at the earliest moment, to discover and correct it.

There is no more fertile field than the domain of the heart in which a periodic health examination will discover early any mild damage; and if proper advice is given, many years may be added to the patient's life.

Analysis of Speech Disorders

SPEECH disorders are common occurrences with which the average teacher of speech must deal.

The following classifications were recently submitted by a special committee of the National Society for the Study of Speech Disorders and were published in the *Georgia Education Journal:*

1. Dysarthria: Defects of articulation caused by lesions of the nervous system. They include inarticulateness, labored speech and ataxic speech. In cases of this kind, the pupil's mental speech processes remain normal. He may express himself fluently in writing, and he may understand everything he sees or hears. His lack is in being unable to say the thing that his mental speech process dictates. The aim then is to prolong a period of relaxation and then establish volitional control.

2. Dyslalia: Functional and organic defects of articulation, such as cluttering, various forms of mutism, invented language, lisping and cleft palate speech. In cases of dyslalia some part of the speech mechanism functions ineffectually —the lip, the tongue, teeth, jaw, hard or soft palate. In cases of cleft palate and harelip the reeducation must follow the closure of the aperture, and it begins where the work of the doctor leaves off. Breathing exercises, such as blowing soap bubbles, gargling and blowing horns, will develop a concentrated breath stream through the mouth. The tones should be developed explosively at first, and gymnastics for the back of the tongue and for the soft palate should be given to enable the child to force the tones through the oral cavity.

3. Dyslogia: Difficulty in the expression of ideas by speech, caused by psychosis, including incoherent speech, absence of ideas, sluggish speech, logorrhea, irrelevant speech and verbigeration. The big task with these patients is to discover any special aptitude which they may possess and concentrate all training in an effort to enable them to utilize to the best advantage whatever intelligence they possess.

4. Dysphasia: Impairment of the power of language caused by weakened mental image. Fatigue and disappointment must be avoided by every possible means in working with dysphasia, and the sequence of tests and exercises must be so arranged that an easily accomplished task will follow a hard one.

5. Dysphemia: Variable disorders of speech caused by psychoneurosis. This form includes neurotic lisping, nervous rapid speech, stuttering and stammering. Nervous instability and stuttering are closely related, and speech improvement is inseparable from mental and physical hygiene. The treatment will include relaxation exercises, breathing exercises, systematic speech training, removal from anxiety, awakening of self confidence and the establishment of a thorough coordination of the mind, voice and body.

6. Dysphonia: Defects of voice, which include voicelessness, thick voice, guttural voice, whispering, breathy voice, nasal voice and other irregularities of like general character. These may be caused by impairment of the vocal cords, constrictions in the tone passage, lack of coordination between breathing and tone production, some psychic condition or irregularities in the throat, nasal and oral cavities. Some cases need medical attention. The teacher's work begins with breathing exercises, relaxation exercises, removal of constrictions, tone placement, the establishment of resonance and a sympathetic coordination between breath and tone production.

7. Dysrhythmia: Defects of rhythm other than stuttering, such as defects of breath grouping, stress placement and inflection. In these cases rhythm of thinking must dominate rhythm of breathing.

Good Food—The Best Spring Tonic

By
MILDRED
BATZ

IN THESE mellow spring days, every one seems to be attacked by a vague feeling of discontent, a longing for something new, no matter what, if only it is something different—a restless urge which is known as "spring fever."

When spring fever was named, it really was a mild form of fever. The early colonists lived the whole winter long on a diet which consisted largely of dried meats and vegetables with the addition of a few dried fruits; consequently, by springtime their systems were urgently in need of fresh foods. Spring fever was the expression for that slow, languid, listless, worn-out feeling which came from faulty winter diets. It was then that the household remedy, sulphur and molasses, came to the rescue. As surely as spring rolled around, this household spring tonic was certain to appear. No doubt the youngsters put aside the listless feeling long enough to seek refuge under the bed when they saw the inevitable approach.

Today, spring fever does not mean quite what it did in those early pioneer times; instead, it is characterized by renewed energy and vigor, a desire to do something new and something different, an urge to get out into the open if for no other reason than to go on a long fishing excursion. This change is due, for the most part, to the improved winter diet. Because of better methods of transportation and better methods of preservation, foods containing the important health-giving properties are available the whole year around. Then it remains only to choose those foods which are essential to

FOOD VALUES
PROTEIN

FOOD	AVERAGE HELPING (ADULT PORTION)	QUALITY	QUANTITY OF PROTEIN
BEEF ROUND	4 oz.	***	
LIVER, BEEF	4 oz.	***	
VEAL LEG	4 oz.	***	
LAMB LEG	4 oz.	***	
HAM	4 oz.	***	
PORK CHOPS	3½ oz. (1 chop)	***	
FISH, LEAN	4 oz.	***	
LAMB CHOPS, LOIN	3½ oz. (2 chops)	***	
SWEETBREADS	4 oz.	***	
CHEESE, COTTAGE	3½ oz. (5 T.)	***	
VEAL CUTLET, BREADED	4 oz.	***	
MILK, SKIMMED	8½ oz. (1 cup)	***	
MILK, WHOLE	8½ oz. (1 cup)	***	
BUTTERMILK	8½ oz. (1 cup)	***	
BEANS, NAVY, DRIED	1 oz. (½ cup, cooked)	*	
PEAS, DRIED	1 oz. (½ cup, cooked)	*	
CHEESE, AMERICAN	¾ oz. (1 in. cube)	***	
EGG	2 oz. (1 egg)	***	
OYSTERS	3½ oz. (½ doz.)	***	
BREAD, WHITE, MILK	2 oz. (2 slices)	**	
PEAS, CANNED	3½ oz. (½ cup)	*	
PEANUTS	½ oz. (20 nuts)	***	
OATS, ROLLED, COOKED	4¾ oz. (½ cup)	**	
PEAS, GREEN	2 oz. (½ cup)	*	
ALMONDS	½ oz. (12-15 nuts)	***	
WALNUTS	½ oz. (8-10 nuts)	***	
RICE, WHITE, STEAMED	4 oz. (¾ cup)	**	
SPINACH	4 oz. (½ cup)	**	
BEANS, STRING	2 oz. (½ cup)	*	

Compare the Quality and Quantity of Protein from Different Foods

Include in the Diet Foods Rich in Good Quality Protein

* * * good quality protein * * fair quality protein * poor quality protein

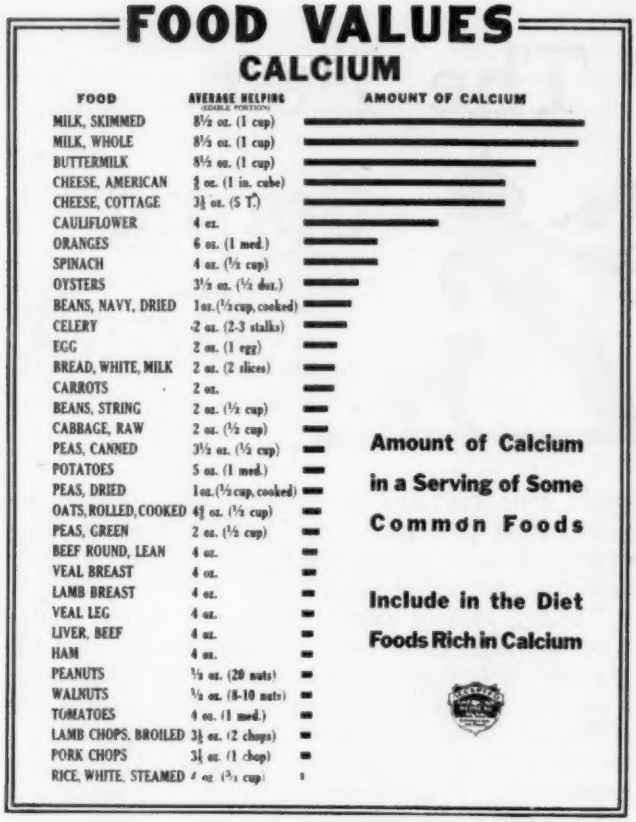
FOOD VALUES
IRON and COPPER

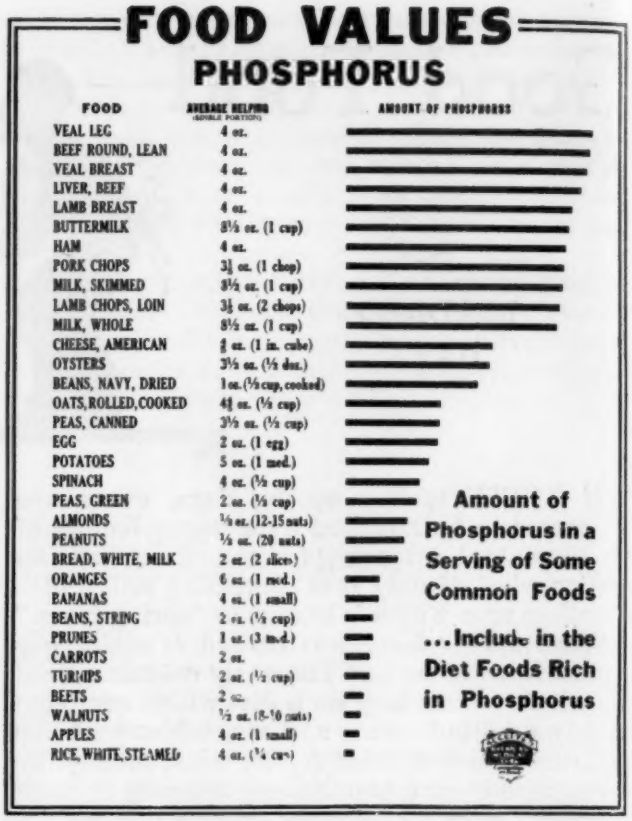
FOOD	AVERAGE HELPING (ADULT PORTION)	COPPER	AMOUNT OF IRON
LIVER	4 oz.	***	
HEART	4 oz.		
BEEF, LEAN	4 oz.	*	
LAMB LEG	4 oz.	*	
HAM	4 oz.		
OYSTERS	3½ oz. (½ doz.)	***	
SWEETBREADS	4 oz.		
VEAL	4 oz.	*	
SPINACH	4 oz. (½ cup)	*	
MOLASSES	1½ oz. (2 T.)	***	
WHEAT BRAN	½ oz.	***	
BREAD, GRAHAM, MILK	2 oz. (2 slices)	*	
POTATOES	5 oz. (1 med.)	*	
EGG	2 oz. (1 egg)	*	
BREAD, Whole Wheat, Milk	2 oz. (2 slices)	*	
OATS, Rolled, Cooked	4¾ oz. (½ cup)	*	
STRAWBERRIES	6 oz. (¾ cup)	*	
CHOCOLATE OR COCOA	1 oz. (4 T.)	***	
MUSHROOMS	4 oz. (5 fresh)	***	
CURRANTS	4 oz. (¾ cup)	***	
PEAS, SPLIT	2 oz. (⅓ cup)	***	
FISH	4 oz.	*	
PRUNES	1 oz. (3 med.)	*	
DATES	1 oz. (3-4)	*	
ONIONS	4 oz. (2 med.)	*	
BANANAS	4 oz. (1 small)	*	
BREAD, WHITE, MILK	2 oz. (2 slices)	*	
BEANS, STRING	2 oz. (½ cup)	*	
RAISINS	1 oz. (2 T.)	*	
PINEAPPLE	4 oz. (½ cup)	*	
MILK, WHOLE	8½ oz. (1 cup)	*	
ALMONDS	½ oz. (12-15 nuts)	* * *	
LETTUCE	2 oz. (¼ head)	*	
BEETS	2 oz. (½ cup)	*	
CARROTS	2 oz.	*	
APPLES	4 oz. (1 small)	*	
PEANUTS	½ oz. (20 nuts)	* * *	

Iron and Copper in a Serving of Some Common Foods

Include in the Diet Foods Containing Iron and Copper

* * * excellent source of copper * contains copper


FOOD VALUES
CALCIUM
FOOD
AVERAGE HELPING (DOUBLE PORTION)
AMOUNT OF CALCIUM
MILK, SKIMMED 8½ oz. (1 cup)
MILK, WHOLE 8½ oz. (1 cup)
BUTTERMILK 8½ oz. (1 cup)
CHEESE, AMERICAN ¾ oz. (1 in. cube)
CHEESE, COTTAGE 3½ oz. (5 T.)
CAULIFLOWER 4 oz.
ORANGES 6 oz. (1 med.)
SPINACH 4 oz. (½ cup)
OYSTERS 3½ oz. (½ doz.)
BEANS, NAVY, DRIED 1 oz. (½ cup, cooked)
CELERY 2 oz. (2-3 stalks)
EGG 2 oz. (1 egg)
BREAD, WHITE, MILK 2 oz. (2 slices)
CARROTS 2 oz.
BEANS, STRING 2 oz. (½ cup)
CABBAGE, RAW 2 oz. (½ cup)
PEAS, CANNED 3½ oz. (½ cup)
POTATOES 5 oz. (1 med.)
PEAS, DRIED 1 oz. (½ cup, cooked)
OATS, ROLLED, COOKED 4½ oz. (½ cup)
PEAS, GREEN 2 oz. (½ cup)
BEEF ROUND, LEAN 4 oz.
VEAL BREAST 4 oz.
LAMB BREAST 4 oz.
VEAL LEG 4 oz.
LIVER, BEEF 4 oz.
HAM 4 oz.
PEANUTS ½ oz. (20 nuts)
WALNUTS ½ oz. (8-10 nuts)
TOMATOES 4 oz. (1 med.)
LAMB CHOPS, BROILED 3½ oz. (2 chops)
PORK CHOPS 3½ oz. (1 chop)
RICE, WHITE, STEAMED 1 oz. (⅓ cup)
Amount of Calcium in a Serving of Some Common Foods
Include in the Diet Foods Rich in Calcium


FOOD VALUES
PHOSPHORUS
FOOD
AVERAGE HELPING (DOUBLE PORTION)
AMOUNT OF PHOSPHORUS
VEAL LEG 4 oz.
BEEF ROUND, LEAN 4 oz.
VEAL BREAST 4 oz.
LIVER, BEEF 4 oz.
LAMB BREAST 4 oz.
BUTTERMILK 8½ oz. (1 cup)
HAM 4 oz.
PORK CHOPS 3½ oz. (1 chop)
MILK, SKIMMED 8½ oz. (1 cup)
LAMB CHOPS, LOIN 3½ oz. (2 chops)
MILK, WHOLE 8½ oz. (1 cup)
CHEESE, AMERICAN ¾ oz. (1 in. cube)
OYSTERS 3½ oz. (½ doz.)
BEANS, NAVY, DRIED 1 oz. (½ cup, cooked)
OATS, ROLLED, COOKED 4½ oz. (½ cup)
PEAS, CANNED 3½ oz. (½ cup)
EGG 2 oz. (1 egg)
POTATOES 5 oz. (1 med.)
SPINACH 4 oz. (½ cup)
PEAS, GREEN 2 oz. (½ cup)
ALMONDS ½ oz. (12-15 nuts)
PEANUTS ½ oz. (20 nuts)
BREAD, WHITE, MILK 2 oz. (2 slices)
ORANGES 6 oz. (1 med.)
BANANAS 4 oz. (1 small)
BEANS, STRING 2 oz. (½ cup)
PRUNES 1 oz. (3 med.)
CARROTS 2 oz.
TURNIPS 2 oz. (½ cup)
BEETS 2 oz.
WALNUTS ½ oz. (8-10 nuts)
APPLES 4 oz. (1 small)
RICE, WHITE, STEAMED 4 oz. (¾ cup)
Amount of Phosphorus in a Serving of Some Common Foods
... Include in the Diet Foods Rich in Phosphorus

health, to fill the lungs to capacity with spring air and to exercise sufficiently to work off all the excess energy stored during the winter months; and spring fever will entirely leave the fever class and become spring energy.

The foods that are good sources of the essential health-giving properties are shown on the accompanying charts. Here are proteins, the body builders; minerals, the body regulators; vitamins, the body protectors; and, last but not least, the calories showing the energy value in a serving of common foods. Each of these values is essential to good health; so include in the diet each day some of the foods that are good sources of the health-giving properties.

Protein is the building material of the body. With every movement, with every breath and with every heart beat, body tissues are broken down. These tissues must be repaired and made as good as new. For this, protein is necessary. Children need from two to three times as much protein per unit of body weight as do adults, for in addition to the protein needed for constant repair of tissues, growing children need protein for building new tissues.

Since the entire supply of protein comes from food, it is much safer to include in the diet those foods which contain a liberal amount, for a bare minimum is liable to fall short when the body needs it most. Although there is a difference of opinion as to how much protein the body must have, the amount usually considered best for the average man is from 70 to 80 grams a day. As can be seen by the protein chart, beef round is the food highest in protein value. Other foods contain comparative amounts, as can be seen by the length of the bars on the chart.

Not all proteins are alike, for there is a great difference in quality. Each protein is made up of amino-acids, which have been aptly called "building stones." The quality of the protein or, in other words, its value in the diet, depends on the number and kind of building stones. As a class, proteins of animal origin contain more of the essential building stones than those of vegetable origin. Hence, much of the protein in the diet should be from animal sources, supplemented by protein from vegetable sources.

Iron is found in almost every tonic because it is so necessary in building good blood. It is an essential constituent of the oxygen-carrying red blood cells; surely no one can deny the importance of an element so linked with one of the most vital processes in the body, the utilization of oxygen. Without oxygen, life cannot exist.

The body processes stop when the oxygen is shut off, and they are slowed down when there is an insufficient supply. If there were no red blood cells to carry the oxygen to the parts of the body where it is used, there would be an internal suffocation just as surely as if the air which was breathed did not contain any oxygen. To prevent any such shortage, plenty of this essential constituent of the red blood cells is needed; and in the building of these cells, iron seems to be better utilized when a little copper is present.

The total amount of iron in the body is small, but that amount is absolutely essential if good health is to be maintained. Foods rich in iron are a good tonic all the year around.

Calcium and phosphorus are sometimes called the two body chemists, since they work together to maintain the proper balance between acid and alkali. They might also be called the body beauty specialists because they, together with vitamin D, build straight, rigid, well formed bones and teeth. Ninety-nine per cent of the calcium in the body is found in the bony structure. However, calcium is not used to advantage in bone building unless there is a calcium-phosphorus balance and vitamin D is present.

The other uses of calcium and phosphorus are legion. Calcium aids in the clotting of blood; it is necessary to regulate the normal beating of the heart, and it also seems to have a favorable influence on the economy of iron. Phosphorus seems to be connected with the whole nervous system. In fact, it is said to enter into more body reactions than any other element; since it forms a part of every cell, it is most essential to life.

Thirty years ago vitamins were practically unknown, and even yet little is known as to what they really are. No one has ever seen one of those precious vitamins, and at present they can be recognized only by the work they do. Their effect on the body, however, is quite certain, and it seems that they are closely linked with general good health and normal growth and development. They even furnish protection against certain nutritional diseases; hence, they have become known as body protectors.

Vitamins are designated by the letters in the alphabet, as A, B, C, D. Because these are all classed as vitamins, it does not follow that they are alike. In fact, in view of the present knowledge, they seem to be widely different from one another, and each seems to have a special function in nutrition.

Vitamin A prevents xerophthalmia, a severe inflammation of the eye, and seems to increase the general resistance of the body.

Vitamin B prevents beriberi and polyneuritis, nervous disorders, and seems to be associated with the stimulation of the appetite.

Vitamin C prevents scurvy and seems to increase resistance to disease.

Vitamin D prevents rickets and aids in the utilization of calcium and phosphorus.

Vitamin G prevents pellagra and influences body vigor.

With vitamins so necessary to good health, it not only is important to include in the diet the foods that are good sources of the vitamins but also to prepare those foods in such a way that they are not destroyed. Especially is vitamin C easily destroyed by heating in air. Vitamins A and B are not readily destroyed by ordinary cooking but are greatly reduced by a high temperature; of course, the longer the high temperature is continued, the greater the loss. For the sake of vitamins, some raw foods should be included in the diet each day; those foods

FOOD VALUES
VITAMINS

Common Foods as Sources of Vitamins

FOOD	A	B	C	D	G
BEEF	+	++	− to +	− to +	++
BACON	− to +	+ to +++	?		++
PORK	− to +	++	−		++
HAM	− to +	++	−		++
LAMB	+	++	−		++
VEAL	− to +	+?			++
LIVER	++ to +++	++	+	+	+++
HEART	+	++	+?		++
KIDNEY	++	++	+?		+++
BRAINS	+	++			
FISH, LEAN	− to +	+		− to +	
OYSTERS	++	++	+	++	++
COD LIVER OIL	+++	−	−	+++++	−
EGGS	+++	+ to +++	−?	++	+++
MILK, WHOLE	+++	++	+ variable	− to +	+++
MILK, SKIMMED	+	++	+ variable	−	+++
BUTTERMILK	+	++	+ variable	−	+++
BUTTER	+++	−	−	+	−
BREAD, WHITE, MILK	+	+	− to +	− to +	+
BREAD, WHOLE WHEAT, MILK	++	++	− to +	− to +	++
PEANUTS	+	++			
WALNUTS	+	++			
BEANS, NAVY, DRY OR CANNED	+	++		−	
BEANS, STRING	++	++	++	− to +	
PEAS, GREEN	++	++	+++	− to +	+
PEAS, DRY	+	++	?		+
POTATOES	+	++	++	−	++
CARROTS	+++	++	++	− to +	++
CELERY	− to +	++		−	
LETTUCE	+ to +++	++	+++	−	++
SPINACH	+++	++	+ (cooked)	− to +	++
TOMATOES, RAW OR CANNED	++	++	+++	−	++
CABBAGE, GREEN, RAW	++	++	+++	−	++
APPLES, RAW	+	+ to ++	++	−	++
ORANGES	++	++	+++	−	++

\+ contains vitamin +++ excellent source of vitamin − no appreciable amount
++ good source of vitamin ++++ extraordinary source of vitamin ? doubtful

FOOD VALUES
CALORIES

FOOD	AVERAGE HELPING (EDIBLE PORTION)	CALORIES
SALT PORK, BOILED	2 oz.	415
PORK CHOPS	3½ oz. (1 chop)	320
LAMB CHOPS, LOIN	3½ oz. (2 chops)	320
PORTERHOUSE STEAK	4 oz.	310
HAM	4 oz.	300
BEEF CHUCK	4 oz.	250
LAMB LEG	4 oz.	220
BACON	2 oz. (4 slices, thin)	200
SWEETBREADS	4 oz.	200
VEAL CUTLET	4 oz.	180
TONGUE	4 oz.	180
BEEF ROUND	4 oz.	175
BREAD, WHITE, MILK	2 oz. (2 slices)	175
MILK, WHOLE	8½ oz. (1 cup)	170
VEAL LEG	4 oz.	170
LIVER, BEEF	4 oz.	150
CORN, CANNED	4 oz.	115
BEANS, NAVY, DRIED	1 oz. (½ cup, cooked)	100
CHEESE, COTTAGE	3½ oz. (5 T.)	100
CHEESE, AMERICAN	1 oz. (1 in. cube)	100
OATS, ROLLED, COOKED	4½ oz. (½ cup)	100
RICE, WHITE, STEAMED	4 oz. (¾ cup)	100
POTATOES	5 oz. (1 med.)	100
BUTTER	½ oz. (1 T.)	100
SUGAR, GRANULATED	1 oz. (2 T.)	100
PEANUTS	½ oz. (20 nuts)	100
WALNUTS	½ oz. (8-10 nuts)	100
ALMONDS	½ oz. (12-15 nuts)	100
MILK, SKIMMED	8½ oz. (1 cup)	90
BUTTERMILK	8½ oz. (1 cup)	90
EGG	2 oz. (1 egg)	70
PEAS, CANNED	3½ oz. (⅓ cup)	65
PEAS, GREEN	2 oz. (⅓ cup)	60
OYSTERS	3½ oz. (½ doz.)	50
CARROTS	2 oz.	25
BEANS, STRING	2 oz. (½ cup)	25
TOMATOES	4 oz. (½ cup)	25
SPINACH	4 oz. (½ cup)	20
CABBAGE, RAW	2 oz. (½ cup)	20

Energy Value of a Serving of Some Common Foods

Include in the Diet Foods for Energy

which must be cooked should never be overcooked, for the vitamins are too precious to lose.

At work or at play, the body uses energy constantly. That energy comes from food and is measured in heat units called calories. The calorie is a term which is familiar to almost every one, not by its definition in nutrition as the amount of heat required to raise the temperature of 1 kilogram of water 1 degree on the centigrade scale but as a unit for measuring the energy value that one gets from foods.

The amount of energy that the body needs is influenced by many factors such as activity, size, age, sex and climate. Too many calories are not desirable; neither are too few, for the body, like an engine, refuses to run without fuel. Body weight, in most cases, can be regulated by the amounts of the various foods eaten. In the up-building diet, those foods which are high in calories should be chosen; in the reducing diet, those foods containing fewer calories should be sought. As a word of warning, however, in every diet, whether or not it is a reducing diet, plenty of good quality protein, minerals and vitamins are essential to the maintenance of good health.

BRIEF HEALTHGRAMS ✣ from Articles in This Issue

¶The x-rays do not take pictures; rather they record a shadow on a plate. The plate then should be interpreted only by one who is experienced in studying x-ray films. *See page 433*

¶Admiral Byrd's great adventure into the unknown and his brilliant achievements pale into insignificance when they are compared with results obtainable at home where Little America awaits on his voyage through life, awaits while his mother prepares the food for his journey. *See page 397*

¶Preliminary visits to the doctor in early life fit children to face courageously whatever ordeals may come later. *See page 401*

¶We seem unaware of the fact that young personalities grow just as surely as do young bodies and young minds. *See page 425*

¶The loss of the temporary teeth and replacement by permanent teeth is a gradual process, starting at about 6 years of age and ending at approximately 12 years. *See page 444*

¶In 1903 the Surgeon-General of the Army reported: "Yellow fever does not now exist in United States territory, and no case has originated in Cuba for about two years. . . ." *See page 446*

¶To ascribe common accidents to an "act of God" is almost blasphemy. *See page 430*

¶The extension of prenatal care, the development of asepsis, with consequent reduction in death from puerperal fever, and improvement in operative technic have constituted the effort of the medical profession in reducing maternal mortality. *See page 437*

¶Every year, heart disease has claimed a mounting toll until in 1930 it killed 213.5 persons per hundred thousand, or one-third more than in 1920. *See page 440*

¶If a child with a birth injury of the cortical spastic type or the basal athetoid type has a normal mentality and is allowed to remain untreated until he is 6 or 7 years old, he will develop bizarre habits in the use of arms and legs, face, tongue and other parts of the body. *See page 398*

¶False impressions associated with shortness of breath often give rise to misapprehensions, for often this complaint is not real. *See page 418*

¶Through establishing colonies with farm, school and hospital facilities for victims of sleeping sickness, much misery created by this disease can be reduced. *See page 394*

¶Ten dollars' worth of mothers' milk obtained from the Children's Welfare Federation of New York City will often carry a sick or a premature infant through the crisis and start him on the road to good health. *See page 411*

¶Medical testimonials, as commonly understood, are almost always worthless. As used by fake healers, they are employed only to boost sales. *See page 407*

¶Foods provide the preschool child with the materials for growth and also with material for maintenance. *See page 413*

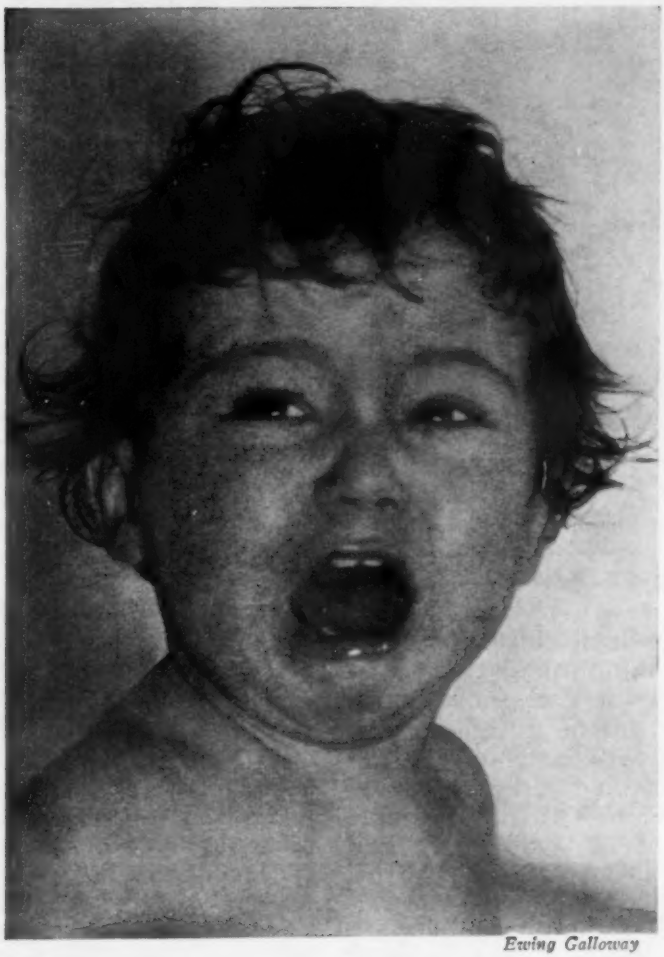
¶Spring fever used to be the expression for that slow, languid, listless, worn-out feeling which came from faulty winter diets. *See page 421*

¶When "the hand that rocks the cradle" has made it safer for infancy, the secondary business of ruling the world will not be so difficult. *See page 416*

¶One of the most obvious defects in the life of the nation today is the deplorable lack of skill in the masses, especially in the pursuits connected with leisure. *See page 404*

People Grow This Way Too

By
E. Lee Vincent



Ewing Galloway

Temper tantrums may begin in infancy, but they are not limited to that stage.

CHILDREN'S bodies grow. The fact is too evident to need mention. Their minds grow also, as most of us realize. What we do not seem to appreciate is that personalities grow too.

Children's bodies grow long and wide. They shoot out of sleeves and pop off buttons. Parents wonder when they buy a new outfit for one of the children whether it will be outgrown before it will be worn out. Sweet at 9 months, babies are, and adorable at 2 years. How we should like to keep them little! Yet we are panic-stricken if they fail to grow. Dwarfs and cripples have too little chance at life; they are too different, too handicapped. Not one of us would freely choose to keep children from growing physically. In fact, we do everything possible to make them grow tall and straight and beautiful.

This is true, also, with the growth of minds. The mentally retarded child is an object of pity wherever he is found. Everything possible is done and every known precaution is taken to stimulate normal mental growth. We could never forgive the person or cease to regret the circumstance that interfered, even slightly, with the desirable course of growth of a young mind.

But we do not seem to react in the same manner to the growth of young personalities. We seem unaware of the fact that young personalities grow just as surely and by just as measurable signs as do young bodies and young minds. We fail to realize that growth of personality can be dwarfed or promoted just as surely as can growth of body or of mind. If a child's personality remains at 20 what it was at 2, he will be as out of proportion, as dwarfed, as handicapped in life's battle as he would be if his bodily or his mental growth had remained at the 2 year level.

We can scarcely blame ourselves for our failure to understand this, however, since the facts about personality growth have been much more recently discovered and are even now far less well known than are the facts about other types of growth. Scientific workers are quite sure now, however, that personalities do grow. That in itself is rather an arresting fact, because it means that we need no longer sigh and resign ourselves to an ungovernable temper or to fits of depression; we need no longer feel hopeless about achieving a sunny disposition or an ability to get along with other people. We need not be "the persons that Fate makes us"; we can, rather, be the persons we wish to be. Better yet, because the case is much more hopeful if we "catch them young," we can develop children into successful, healthy and happy personalities.

Perhaps one can best grasp the conception of personality growth if one considers two or three examples of traits, the growth patterns of which are fairly well known. The growth of the expression and control of the anger impulse will serve as one illustration. In anger, as in other impulses, growth takes place in two ways: (1) by a change in the nature of the things that make one angry and (2) by a change in the way in which one expresses anger.

What makes a new-born infant give vent to anger is not entirely agreed on by investigators;

Ewing Galloway

Even at the runabout age, children should show some tolerance, some sympathy, some consideration for others and some willingness to cooperate with them.

ordinarily, however, anger is roused by any restriction of the numerous and vigorous random movements with which normal infants occupy most of their waking time. If a young infant is held gently so that he cannot move freely, the usual result will be an outburst of rage. He will strike out with fists and feet, will struggle to free himself and will scream as loudly as possible. One or two other simple stimuli, such as a puff of air against his cheek or holding his nose for an instant to cut off his breath, will precipitate the same type of primitive behavior. No one, I think, would question the propriety of an infant who resented having his physical freedom hampered; one would not consider him childish if he expressed his anger directly and forcibly. Most persons, however, would look askance at an adult who broke into a fit of temper because some one had pushed against him in a subway or theater rush. We should be quite right to be shocked if an adult were made angry by physical thwarting and if when angry he expressed himself by the same direct method he used when he was less than a year old.

Imagine several 2 year old children playing together. One sees a play-wagon that he wants and starts across the yard to get it, only to find that another child had the idea a few seconds ahead of him and has already taken possession. Not deterred by this, he pursues his desire and attempts to take by physical force what seems to him at the moment to be his right. A fight ensues, both children tugging, striking out, probably screaming in anger. Unless some one interferes, the best tugger and striker wins. It is to be expected that a 2 year old child will become angry when he is deprived of a concrete object he wants to possess; it is to be expected that he will tug, strike and scream his resentment if he meets resistance in his attempt to obtain the coveted object.

It is distressing, however, to see a 16 year old behave on such a level of anger; yet many 16 year olds do. I know several, most of them young people whose parents have proceeded on the theory that "self expression" should never be inhibited. One 16 year old boy permits himself complete freedom when he is angry, and he is proud of the fact that his temper is famous. If any one happens to cross him in any way, he is liable to hurl a book or a dish at the offender, to kick chairs, to slam doors and in other ways to "express" himself. It did a good deal for this boy to be given the realization that any vigorous 2 year old could equal his demonstration and that most 4 year olds had left such behavior behind.

Most 3 year old children have learned that kicking, striking and throwing objects is behavior not to be tolerated in good society; so, being in fair possession of language fluency by the age of 3, they develop the technic of throwing words. Frequently they discover that hurled words are more potent as weapons than hurled objects. Almost 100 per cent in effectiveness, especially when hurled at an offending parent, is "I don't love you any more" or, still more vociferous, "I hate you." Such personal invectives as "fool" or "dumb-bell" are fairly effective as missiles to be used against peers as well as against adults. Some children find an effective weapon in pouting. Few parents can endure an unhappy countenance with its implication that life is no longer worth while. Playmates, fortunately, are largely impervious to this. A neat revenge against peers, however, often lies in the ability to destroy a game by absenting oneself from it—the "All right, I won't play any more" idea.

Few persons are fortunate enough to escape acquaintances who, although full grown in body and often brilliant in mind, are still 4 years old or thereabouts in anger. In a bridge game some one trumps an ace. Cards are slammed down on the table, and the game is over for the evening. A 40 year old man of my acquaintance is a college professor, but he kicks chairs and bangs doors whenever his wife dares to displease him. A 50 year old president of a big business has a heart attack whenever his wife or any of the children fail to fall immediately into line with his plans. And I know a 65 year old woman of prominent social standing who, whenever her 40 year old son wants to go out for an evening alone, throws herself on her knees and prays loudly that heaven will forgive such

an undutiful son. Could these be temper tantrums? Yes, I think so, and on about a 3 or 4 year level.

If one leaves all these childish expressions behind in the process of growth, will it mean that, when grown, one will never become angry? Does being grown-up mean that nothing can arouse one to anger, that one never expresses anger? No, indeed. Anger is needed to run the world. No great reform movement has ever been launched unless some one has become angry at some existing abuse; no great social movement ever progressed to worthwhile accomplishment unless some one stayed angry long enough to do something about the thing that disturbed him. We need anger, but we need it on an adult basis. In grown-up anger the stimulus is different; the expression is different. Children become angry when their bodily activity or their personal wishes are thwarted. They express anger by physical or verbal explosion, by pouting or by attempting personal vengeance. Mature anger is roused only by such nonegotistic stimuli as injustice to oneself or to others, by such impersonal situations as social catastrophies, abuse of power, exploitation of women and children, and misuse of public funds. In maturity one realizes that explosive physical or verbal expression of a personal nature is seldom profitable and is often expensive in the long run. In maturity, expression is always socialized and consists of active work toward the end of correcting the difficulty involved.

In the same way the impulse to fear should grow. Both the things one fears and the manner in which one expresses fear should change as the personality grows. In infancy, fear is roused by intense and unexpected stimuli like sudden noises or removal of support. A little later anything that threatens the safety or security of the physical body will be a cause for fear.

Still later the child learns to value his ego as he does his body, and he will learn to fear anything that threatens the smugness or complacency of his ego. He will learn to fear failure, to fear appearing at a disadvantage, to fear that his clothing will be different, his family less respectable or his place in the social group less envied than that of his fellows.

The infant expresses fear in a direct, primitive manner. He cries and clutches in an impulsive attempt to call attention to his difficulties and to make himself physically secure. When he can creep or walk he takes himself away from the threatening situation if he can and seeks a protection, preferably with his mother or some familiar adult. As he learns physical retreat from objects or situations that threaten his physical body, so also he learns mental retreats when his ego is threatened. He learns to bolster up his pride with rationalization, substituting false reasons for the true reasons for his behavior. If his pride and his feeling of importance are persistently threatened, he may retreat into day dreams, may live in a world of imagination where he can control everything and where, therefore, he has nothing to fear. Sometimes a frightened child resorts to blustering, bluffing and bullying as a means of compensation for his own feeling of inadequacy.

Few persons grow past childish fears. Many intelligent adults are still driven by manifold fears about their physical safety; they are afraid of the dark, afraid to cross streets, afraid of elevators, afraid of burglars. In fact many are driven day after day by one fear after another. Not all these fears are really fears for physical safety; many of them are mere cloaks for fears which concern the ego. But the underlying reason for these fears is the same. The individual has not grown past the child's pattern of fear.

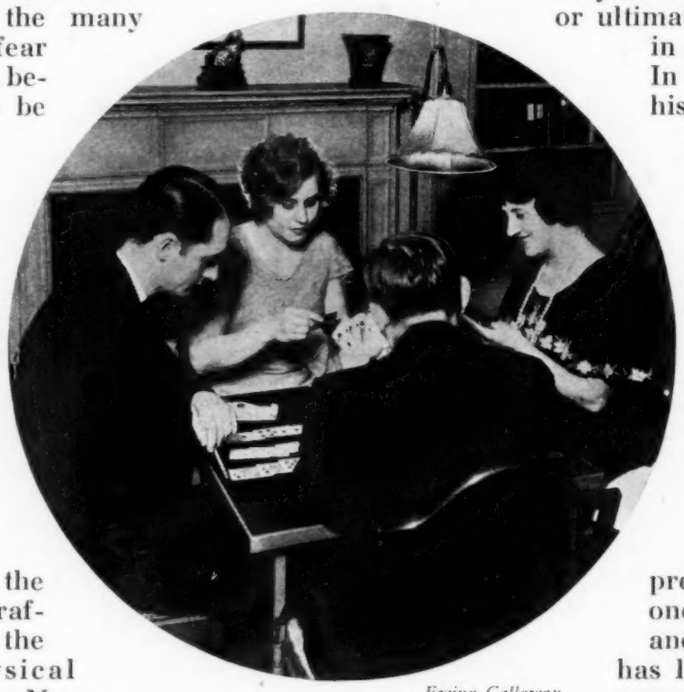
The same thing is true of the more subtle types of expression of fear. The professional or business person who is afraid that he will not be as successful as he could wish often

Century Photo

The gang age fosters a spirit of group loyalty and unselfishness.

adopts the technic of attacking other persons engaged in the same profession or business. He spreads malicious gossip; he does everything possible to make others appear inadequate. Thus he fools himself into a greater feeling of security because he has succeeded in convincing himself that others are more inadequate than he is himself. Pediatricians, psychologists and psychiatrists have frequently discussed the many evidences of childish fear which must be left behind if maturity is to be achieved.

What, then, is maturity in fear? It is not indifference to physical danger; it is not complete obtuseness to social approval or disapproval. It is, rather, the development of courage. Such courage should permit comfortable living in the face of the dangers inherent in adult life, as, for example, the dangers of germs, of traffic, of burglars and all the other recurrent physical threats of modern life. Mature courage should carry with it a sanely balanced sense of the essential importance of any single individual, so that each person will strive for success yet will be free from the slavish fear of failure.



Ewing Galloway

Then some one trumps an ace; cards are slammed down, and the game is over for the evening.

Walter Lippman in his "Preface to Morals" has stated the case for maturity extremely well: "The critical phase of human experience, then, is the passage from childhood to maturity, the critical question is whether childish habits and expectations are to persist or to be transformed. We grow older. But it is by no means certain that we shall grow up. . . . The symptoms of a childish disposition may appear as a disposition to feel that everything which happens to a man has an intentional relation to himself; life becomes a kind of conspiracy to make him happy or to make him miserable. In either case it is thought to be deeply concerned with his destiny. The childish pattern appears also as a deep sense that life owes him something, that somehow it is the duty of the universe to look after him, to listen sharply when he speaks to it."

Another interesting growth pattern is the growth of love. A new-born baby knows little about love. People as such do not exist for him. His awareness of life consists largely of consciousness of himself, particularly of his physical self. When he is well fed, exercised, clean and comfortable, he is content. Let him become hungry or otherwise uncomfortable, however, and he registers the fact audibly with no consideration of time, place or circumstance. In the beginning of life he has no consciousness of the fact that some person comes to his rescue; much less does he appreciate that this person may have to sacrifice immediate or ultimate pleasures or comfort in order to give him care. In other words, he lives his own life, largely on a physical plane, and is neither aware of nor concerned with other people's convenience or inconvenience. At 6 weeks of age he has usually learned to connect the human voice or face with the fact that he receives care; at 3 months he has learned to discriminate between persons and perhaps shows preference for the care of one person rather than of another. In this sense he has learned to love another person than himself, and he may show his love by permitting only the favored person to wait on him and by rewarding that care with a smile or with cooing sounds. There are some adults who have not progressed beyond this stage, whose entire conception of love is to allow people to wait on them, and who have no more sense of responsibility to other people than to pay them with a smile or a physical caress.

Children of 2 or 3 years have usually passed this stage, however, and have broadened their conception of love to include a feeling of obligation not to demand unlimited service but to care for some of their own needs occasionally and to perform some degree of service for some one else. They should have made a real beginning in feeling responsible to the family group, in developing ability and willingness to do everything possible in feeding themselves, in keeping their toys in order and in doing occasional errands for other members of the family. They should have broadened personal affection to include not only the mother or nurse who gives physical care but also other persons whom they meet often and who, therefore, become familiar to them. Preference is usually shown, of course, for those persons who provide the best amusement or the greatest amount of praise, as well as for those who give the greatest

number of presents. One could scarcely expect a 3 year old child not to be swayed by such advantages. Tragedy may result, however, for the adult who can love only persons who minister to his physical needs, who flatter and praise constantly or who pay the highest material price in present giving. Mates chosen on such a basis are seldom successful; friends chosen on such a plane are likely to be similarly limited in their conception of love.

The other day in the nursery school yard I saw an incident which showed the level of the 4 year old conception of love. Betsy and Joyce are close friends, but at the moment there was only one available tricycle and each child apparently wanted a ride. Betsy was clinging to one end of the tricycle, Joyce to the other; both were crying; each was apparently puzzled at the resistance from the other; each by way of consolation was caressing the other with one hand yet clinging desperately to the coveted object with the other hand. Each had progressed far enough in love growth to feel concern at the unhappiness of the other, yet each was still egocentric enough to be blind to the fact that she was causing that unhappiness. Many husbands and wives are thus concerned and thus blind.

Ralph, aged 5, one day gave an illustration of about this level of love when he announced, "Ben can play with me today. I love Ben. Some days I love Ben and some days I don't. I love Ben today." Ralph was aware of his own feelings and reacted thoughtlessly to his own impulses. That Ben might have feelings had not occurred to him. Even at Ralph's age, however, there should be some insight into other people's thoughts and reactions, some tolerance, some sympathy, some willingness to adjust oneself to those thoughts and reactions.

Fortunately contacts during the gang age usually provide lessons that force consideration for others. Children from 5 or 6 to 12 or 15 years of age play freely, as a rule, with other children of the same ages. Group loyalties gradually force a child to curb his most self centered impulses in favor of group welfare; otherwise he is ostracized, a fate which no normally growing child can endure. Gang lessons are usually quite objective and impersonal. Faults are discussed openly; discipline is prompt and relentless. Black eyes and bloody noses are all part of the experience for boys. Coldly turned backs and cruel words serve to whip girls into line. The parent who interferes too readily in these situations is robbing his child of one of life's prime opportunities to learn adjustment to people.

Some persons have never outgrown the gang age. They live only for the plaudits of groups, are dependent for happiness on the continuous stimulation of parties, theaters and night clubs. To spend an appreciable amount of time alone or with one or two persons would prove intolerably boresome. They have cultivated too few creative interests, have learned to call out and to give too little to love of friend or mate.

From 12 or 15 years of age through the next two or three years, the period of early adolescence, there is likely to be a time when, if the child is developing normally, he shifts from the more or less impersonal relationships of the gang to more intense personal relationships. Love becomes a much more emotionally personal thing. Hero worship occurs, often with such complete devotion that the child's personality undergoes important changes in the direction of imitation of the hero. If the hero, real or fictitious, is a good model, the changes are for the better. Habits of personal cleanliness, good attitudes toward work, and real progress toward preparation for vocation or profession may result from the emotional impetus afforded by the desire to please or to emulate a hero. If the model is desirable, parents would do well to curb a natural tendency to jealousy and to regard this experience as one more step in the growth process, by which lessons may be learned that have not been mastered previously.

Another aspect of this early adolescent development is the tendency toward intense friendships with other members of one's own sex. The child seems in a sense to return to the beginning of the love cycle at which his chief concern was with himself. In this instance he has progressed beyond self love to the extent that he is capable of loving some one other than himself, but he chooses some one most like himself; namely, a member of his own sex. Like any other life experience, these intense friendships may, of course, result in harm to the participants. However, they may, and usually do, result in genuine development. They are bad if they tend to limit the number of contacts, to restrict interests, to assume an aspect of exclusive possessiveness. They are good if they tend to increase the span of contacts and to introduce the children to new friends and to new interests. They serve a unique purpose in the personality growth if they teach the participants a richer understanding of people, a progressive ability to adjust moods and desires to those of another and beloved person, and if they increase independence of thought and action which is at the same time tempered with consideration for others. If the child passes through this period of growth better prepared to live happily with another beloved person and with a deeper appreciation for the value of friends chosen from the members of his own sex, he is just that much better prepared for adult life than is the child who passes too quickly into the "boy-crazy" (if a girl) or the "girl-crazy" (if a boy) stage.

The girl-crazy or boy-crazy stage, the later adolescent period, serves its purpose also. It increases tolerance for *(Continued on page 467)*

Big and Tough—But He Takes NO CHANCES

By
Curtis Billings

BIG GAME HUNTERS report that wild animals seldom die from accidents. If this is true, and it does not seem unlikely, man errs in at least one respect when he considers animals inferior and stupid, for they have achieved a far better adjustment to their world than man has to his. They have accomplished this without the aid of the imaginative power which sets man apart. Man can foresee danger and knows beforehand the terrible effects of accidents; yet he is indifferent to hazards.

Thousands of persons, for instance, die every year in India of snake-bites because they are indifferent to this omnipresent hazard. Because of his care, the white person in India, unused to this hazard, is seldom a victim. The same evidence is found in the United States where about as many persons are killed annually by automobiles as die by venomous reptiles in India. We in America are thoughtless and, both as drivers and pedestrians, we take wanton chances with our own lives and with the lives of others.

The wild animal wisely avoids taking chances with danger wherever he can; the human being rushes in regardless.

This discussion is not in praise of cowardice; fear is frequently a negative and destructive force. But no one admires the courage of the savage who, with poised spear, charges the oncoming steam locomotive. Educators advise one to fear intelligently; that is, to recognize that certain dangers are dangers, and that it is absurd, as the savage's charge is absurd, to take unnecessary chances with them.

Among the common absurdities which cost many lives every year are the following:

Absurdities in Driving Automobiles

1. Insisting on the "right of way" at intersections.
2. Turning right from left lane, or vice versa.
3. Passing another car at an intersection or at the crest of a hill.
4. Failing to observe signs and signals.
5. Failing to signal when stopping or turning.
6. Driving over railroad grade crossing without pausing.
7. Failing to slow down at schools or where children are playing.
8. Driving a car with poor brakes, defective steering gear, or headlights out of adjustment.
9. Zigzagging in traffic.
10. Driving with three or four persons in the front seat.

Absurdities at Home

1. Using a rocking chair, a barrel head or a box as a step-ladder.
2. Polishing floors until they are as slippery as wet ice and placing "unanchored" small rugs at the head or foot of stairs.
3. Putting hot ashes into a wooden container.
4. Putting poison into unmarked or wrongly marked bottles.
5. Leaving matches, pins or razor blades where young children can find them.
6. Dry cleaning with gasoline, naphtha or benzine.
7. Failing to repair broken steps or stairs.
8. Using electric equipment of poor quality or worn extension cords.

9. Cutting anything with any sharp tool, so that in case of a slip, one is liable to be injured.
10. Failing to have first aid materials in the home.

ABSURDITIES, MISCELLANEOUS

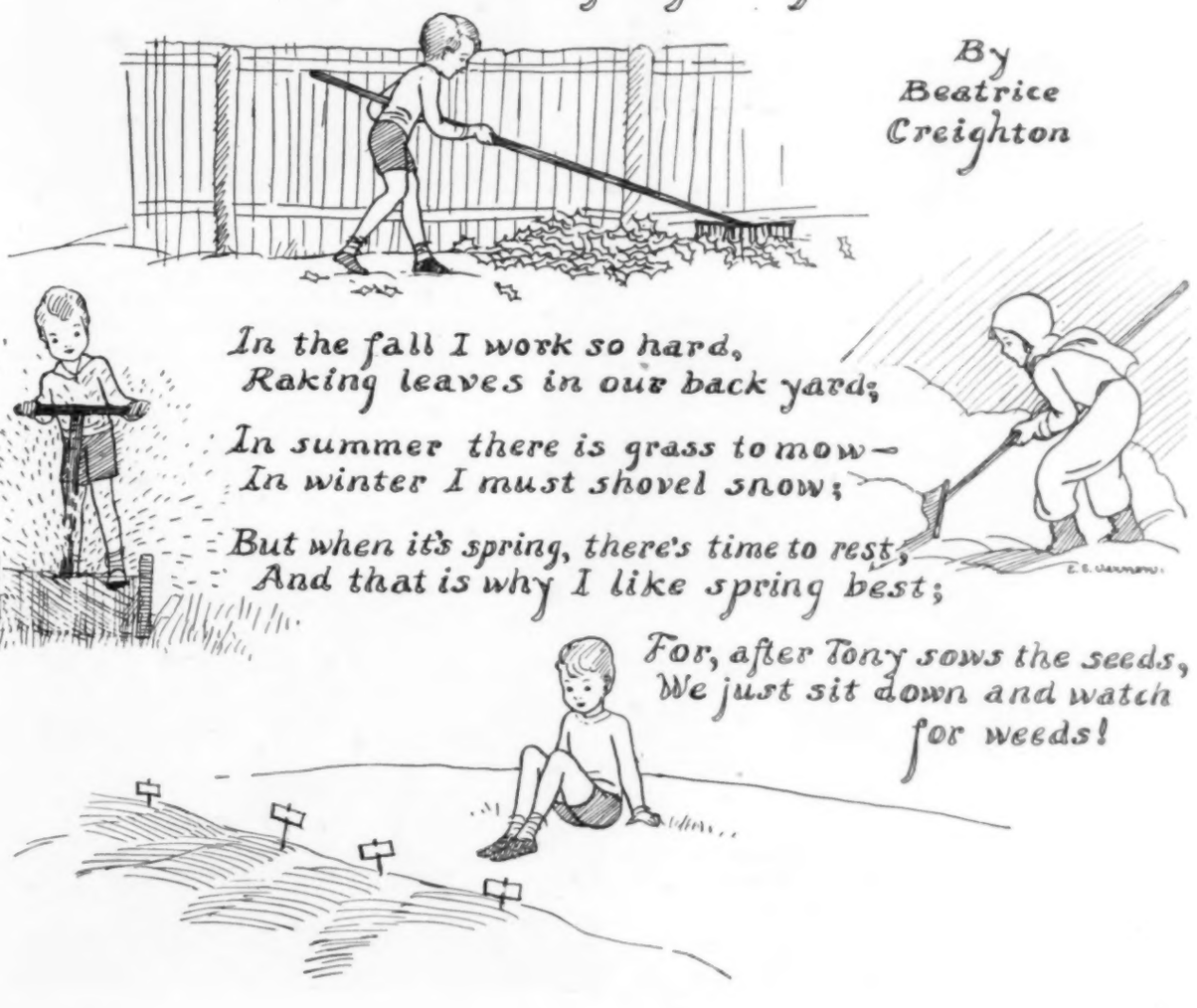
1. Skating on treacherous "spring" ice.
2. Playing marbles and roller skating in the streets.
3. Hitching rides on the back of automobiles or trucks.
4. Using wire for kite "string" and flying kites near power lines.
5. Pointing a gun at a person except in self defense.
6. Throwing a snowball at a person who is wearing glasses.
7. Challenging younger children to do dangerous things.
8. Playing practical jokes in a school shop.
9. Failing to treat a small wound to prevent infection.
10. Running the motor of an automobile in a closed garage.

These thirty absurdities are thirty of a thousand and one! It would be impossible, and probably undesirable, to attempt to list all the many foolish things that human beings do. These are some of the things that they must not do if the terrific toll of accidents is to be reduced in the United States. Causes such as these bring about no less than 97,000 deaths each year; all these deaths are unnecessary; all are easily averted, and practically none "just happened." Earthquakes and floods may not be preventable, although it is not finally conceded that floods cannot be prevented; but to ascribe common accidents such as these absurdities to an "act of God" is almost blasphemy.

The elephant weighs a couple of tons; he has a thick hide; when aroused, no living thing can withstand him, but he takes no chances. Is there not a lesson to be learned in this for human beings, who are so much weaker?

In Praise of Spring

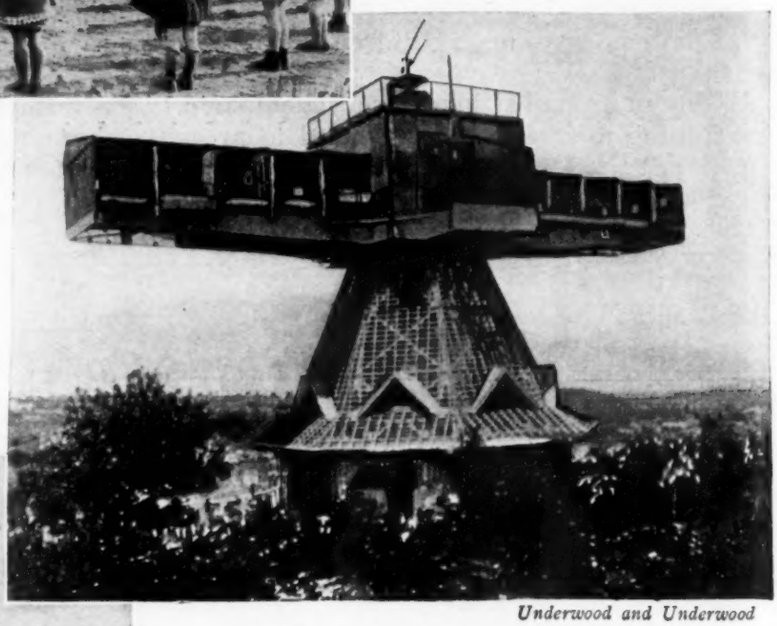
By Beatrice Creighton


In the fall I work so hard,
Raking leaves in our back yard;
In summer there is grass to mow—
In winter I must shovel snow;
But when it's spring, there's time to rest,
And that is why I like spring best;
For, after Tony sows the seeds,
We just sit down and watch
for weeds!

Century Photos

These preschool children, engaged in play, are proof of the success of an experiment carried on in a model village near Strasbourg, France. This garden village is constructed for occupancy by young married couples pledged to rear large families to combat race suicide.

The odd solarium shown to the right might be called a "sun mill" for it affords heliotherapy during the entire day by revolving the wings on a huge axis. In this way, patients at Aix-les-Bains, France, receive the full benefit of the sun's rays.



Underwood and Underwood

Keystone-Underwood

Knocking at village doors to sell his wares, the young onion pedler of historic Sussex, England, knows that it's the seasoning that counts.

Roofs have become the answer to the cities' needs for sunshiny space. The roof of a home in Berlin has proved ideal for the care of children, as may be seen in the picture below.

Underwood and Underwood

TRAINING FOR ATHLETICS AND HEALTH

By
ALFRED E. PARKER

Chapter V
Modern Health Methods

The Modern Hospital

The trays are filled under the supervision of the dietitian.

"COME right this way, Ted," said Dr. Smithson pleasantly. Smiling and calling a jolly "hello" to the girl in white behind the office desk, he escorted Ted along a wide, well lighted hall. Ted was impressed by the silence and by the immaculateness of the place.

Nurses in white hurried noiselessly over the thick linoleum. Years before, Ted had visited a hospital, and his memories of that place were mostly of dinginess, darkness and dirt; how different this modern hospital was!

"I guess I'll take you to the basement, and we can explore from there to the top of the building," remarked Dr. Smithson as they came to an elevator. "It may surprise you to know that in the basement is the kitchen, one of the most important departments of this great hospital. It supplies hundreds of patients with food."

In a few seconds Ted found himself in a large kitchen, at the back of which was a huge gas range. On top of this wide stove were pots and pans so big that an ordinary cooking pan would have looked like a toy utensil beside one of them. Along one entire side of the room were steam tables, and at the end opposite the stove were several electric dumb-waiters. The space in the center of the kitchen was largely filled with serving tables and movable racks for holding stacks of trays.

"You see, Ted," began Dr. Smithson in explaining the workings of the kitchen, "all this extensive equipment is necessary to prepare the food which in most cases is taken to the hundreds of patients three times a day. Each doctor who has a patient in this hospital prepares a special diet list for that individual, and the dietitian, who has charge of the kitchen and is an expert on foods, must see that all the meals are cooked according to instructions.

"Supervised by the dietitian, several girls fill the trays at the serving tables. Notice that silver plates are used and that there is a compartment under each plate filled with hot water so that food can be kept hot while it is being conveyed to the various rooms."

"Just how do they know they are getting the different meals to the right persons?" asked Ted.

"That job is up to the dietitian," answered Dr. Smithson. "She receives a typewritten menu for each patient, and after checking it carefully she puts it on a tray where it is held securely in place by a salt shaker or a dish. At the top of the list is the patient's name and room number. When the tray reaches the correct floor, the nurse there again checks the food to see that it is exactly as prescribed by the physician.

"My experience has been that few mistakes are made in getting the right food to a patient, so carefully is it checked. The dietitian and her helpers in the kitchen are competent people. They are given the most modern equipment to help them to be efficient in preparing food quickly and well. For example, here is a special electric stove for emergency orders; and here is an automatic potato masher which, while you are busy with other matters, will also mix the smoothest mayonnaise. Here, too, is

Ewing Galloway

Cleanliness is indeed akin to godliness in the operating room.

the most approved type of ice-box for keeping meat, vegetables and milk. And these delicate scales enable the nurse to weigh the food in grams according to the doctor's instructions."

"Everything looks so clean and well cared for," commented Ted.

The Dangers That Lodge in Dirt

"Yes," replied Dr. Smithson, "complete cleanliness is the goal of all modern hospitals, Ted, for infected dirt harbors bacteria and disease germs, and a constant battle has to be waged against these enemies. Of course, ordinary dust or dirt may be quite harmless, but infected dirt, which may harbor infected droplets from the mouths of human beings or animals or filth coming from persons with contagious disease, is dangerous and one must continually guard against it. Since bacteria were discovered with the aid of a microscope and it was found that certain types of these invisible organisms were dangerous to man, medical science made one of its biggest forward strides. Bacteria soon die in sunlight. They thrive best in dirt and in dark places. That is why this hospital is so clean and well lighted. Germs have a slim chance here.

"But germs do thrive in many places and that is one reason why many of the sick persons are here now. Germs travel only a short distance through the air, for they are conveyed by droplet infection. That is, when people sneeze, cough or talk, they hurl particles of mucus and saliva into the air. Germs riding on these particles may travel as far as 6 feet or more from an individual and remain for some time on dust floating in the air. In crowded places, such as street-cars, theaters and public halls, droplets are multitudinous and are transferred from one person to another. Some persons have the resistance to throw off these germs. This resistance is made possible, in part, by the skin, which prevents the entrance of germs, by the hairlike bodies in the air tubes of the lungs, which protect against dust, and by hairs in the nose, which catch dust particles. These mechanical methods of resistance to disease are supplemented by chemical processes within the body which build up an immunity to specific diseases. It should be remembered, then, that high physical resistance does not necessarily mean immunity to those diseases.

"Some persons possess a natural immunity to certain diseases. That is, there is sufficient antitoxin in their bodies to resist a particular disease. Such individuals are said to have a natural immunity to a given disease, and even when in contact with the disease they do not seem to contract it.

"Another type of immunity is known as active or acquired. For example, a person has chickenpox. Immediately Nature sets about to create an antitoxin to resist the bacteria causing chickenpox. In time the antitoxin helps the person to get well. The chickenpox antitoxin usually stays with the individual the rest of his life, and he does not get chickenpox again.

"It is possible, also, to bring about an artificial immunity. Antitoxins are manufactured outside the body or within the body of an animal. The antitoxin is given to a well person for temporary protection or to a sick person to help fight the disease. A modification of antitoxin, called toxin-antitoxin, may be given to a well person to protect him for life against the disease for which it is specific, as the toxin-antitoxin for diphtheria.

Cleanliness Discourages Germs

"All types of disease germs are transmitted in some such way as I explained a moment ago. It has been quite accurately estimated that of all diseases, 75 per cent are caused by bacterial or germ infections. When you know such facts, it is not hard to see why cleanliness and other rules of personal hygiene are so important, is it? But hospitals are not the only establishments that should be clean. Homes should be kept clean and free from darkness and dirt so that germs will not have a chance to thrive. Houses are more healthful to live in if there is no obstruction to sunshine. Shade trees, for example, are often planted too close to a house and thus shut off all sunlight. Thorough venti-

lation is also important in keeping a house healthful.

"Let's visit the x-ray room while we are on the lower floor," suggested Dr. Smithson, as he and Ted left the kitchen. On their way to the x-ray room, they passed an up-to-date pharmacy for the use of the physicians in filling emergency orders. To Ted the x-ray room was nothing but a jumble of meaningless apparatus.

"There are entirely too many mistaken ideas about the x-rays," resumed Dr. Smithson, "and because of that fact many people will have nothing to do with them. Few discoveries have contributed more to help physicians in diagnosing ailments than has this queer-looking machine. When by accident or from other causes something happens to an inner part of the body, this machine helps the physician. It does not take pictures, as many suppose, but rather a shadow is recorded on a plate. These shadows are sufficiently plain, however, to enable the physician to tell what the trouble is, although their interpretation does not come easily, for experience in studying x-ray films is required to make definite conclusions."

"Aren't x-ray machines dangerous?" asked Ted, who was keenly interested.

The Misunderstood X-Ray Machine

"There are all kinds of wild tales abroad about the x-ray machine," answered the doctor. "Some of these rumors would lead one to think it was a 'death machine' and not a machine that is of real help to the medical profession. It is often said that one can be badly burned when an x-ray picture is being taken. This is untrue, for the x-ray machine does not burn; no discomfort at all is felt by the patient.

"Moreover, while the x-rays are produced electrically, no shock can be felt from them. The truth of the matter is that the x-rays are really a type of light that cannot be seen with the human eye. When the rays were first discovered in 1895 in Germany, they were such a mystery that scientists in experimenting with them did lose their lives; the operator of the machine who works with them for years is still liable to get x-ray burns. But the x-rays when competently administered are harmless to the patient and are a great benefit to mankind.

"It is marvelous when one thinks of it, Ted, how useful this machine is. Not so many years ago, when a person had a severe headache the physician administered a drug which gave temporary relief; and this is probably true in some places even today. The physician of years ago did not know how to get at the cause of inner pains. Today, when a headache persists, the physician may have x-ray pictures taken of the head, which may reveal sinus trouble or an infected tooth; either of these conditions may cause the pain. If he finds nothing wrong apparently with the organs close to the head, he knows that he must seek elsewhere for the cause. In olden times, however, the cause was not sought; sufficient advance had not been made for that, and the result was that the physician often had difficulty in making a diagnosis.

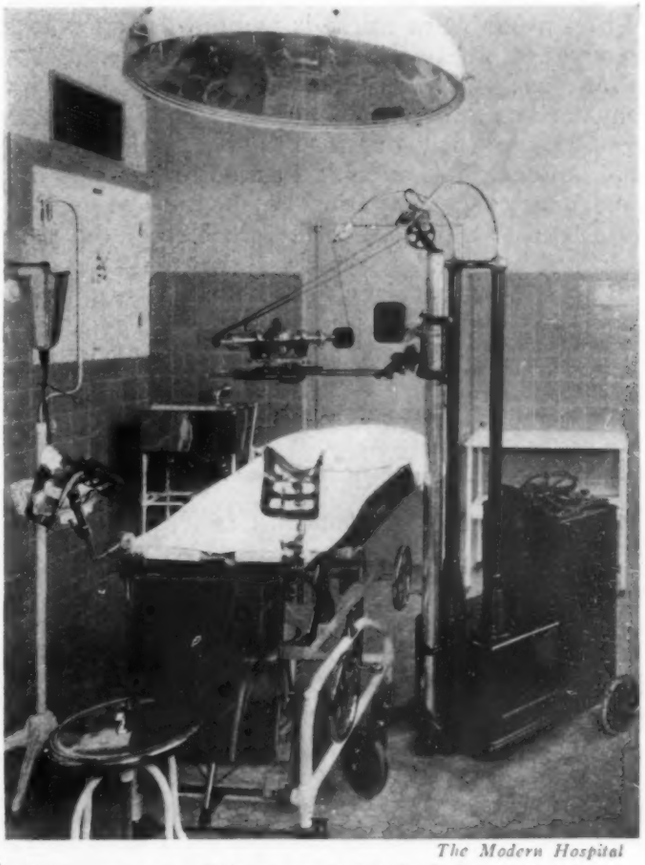
Today there are numerous ailments such as gallstones, kidney stones, stomach trouble and broken bones that can best be treated after x-ray films have been made; the result is that the physician gets at the cause of the trouble more quickly and can help the patient to health more surely than could ever have been done before.

"From here we will go to the operating room, which is one of the most important parts of a modern hospital."

Where Silence Is Golden

Having arrived on the next floor, Ted found himself walking along a wide hall with rooms on either side. The impression of silence and cleanliness increased; it cast a spell over him which he desired to express, but for which he could not seem to find the proper words. And then Dr. Smithson began speaking again:

"On each of the floors is a supervising nurse who has charge of all the nurses on the floor and sees that the doctors' orders are carried out. Here is the supervisor's desk where she keeps a record of all the doctors' orders. It is here that the lights flash, indicating that a patient is calling for a nurse."



The Modern Hospital

The x-rays are of immeasurable benefit to mankind.

The supervising nurse sat at her desk writing; she greeted Dr. Smithson pleasantly as he approached to introduce Ted. Before the doctor resumed his explanations, he pointed to a board which hung on the wall and was covered with rows of room numbers; there was a small electric bulb above each number.

"There's a light now above room 236. A patient is calling for a nurse. Not so many years ago the patient rang a bell for the nurse, but that caused entirely too much noise; this modern method is much better."

"Are the nurses in all hospitals as pleasant as they are here?" questioned Ted. "I always thought nurses were severe, businesslike women who seldom if ever smiled."

"Well," laughed Dr. Smithson, "nurses are businesslike, but you will find the majority of them kind and extremely anxious to look after a patient's welfare. They are pleasant, too, in my opinion. And considering all the hard work they have to do, they might well be grouches though they seldom are.

"Before we go on, perhaps you might like to hear the auto-call. Would you put in a call for Ted Radford?" asked Dr. Smithson, addressing the supervising nurse. A second later Ted was startled to hear a moderately loud but clear voice calling, "Ted Radford is wanted. Is Ted Radford on the second floor? Dr. Smithson wishes to see Ted Radford at once."

Dr. Smithson laughed as he watched the confused look on Ted's face. "That's the auto-call. Above your head here you'll see a radio speaker. When a doctor or nurse is wanted for an emergency, the girl in the office speaks into a microphone and puts in a call which is broadcast on the various floors. By such means, if an emergency patient is brought to the hospital, a doctor can be located at once and asked to hurry to the emergency receiving room; or he may be needed to attend to a patient in the absence of the personal physician."

From the supervisor's desk Dr. Smithson took Ted to the operating rooms. Here Ted found two rooms even more spotless than any he had seen on the entire tour. Between these two rooms he was shown the preparation room, in the center of which were tile sinks quite like those found in a home kitchen.

The Greatest Precaution Is Necessary

"This room," explained Dr. Smithson, "is where the doctor cleans his hands before an operation. He scrubs his hands and arms for ten minutes and then puts on rubber gloves that have been sterilized for twenty minutes. Before going into the operating room the physician puts on a sterilized gown, a face mask and a cap. All this is done so that there will not be any possibility of infection while he is operating. In addition to this, all the instruments used in an operation are thoroughly sterilized, and the part of the body to be operated on is washed with alcohol and painted with iodine. The nurses, too, must be just as careful about wearing sterile uniforms and cleaning their hands as is the doctor. In the past, areas operated on did become infected. Today, though, this only happens when precautions fail, and this does not occur often."

"But tell me, Doctor," asked Ted, "haven't there been cases of doctors leaving a sponge in a wound after operating? At any rate I have heard of such cases."

"Yes, there have been a few such cases. To guard against such an occurrence, in practically all hospitals a double strand of tape is attached to each sponge. I do not know of any hospital in which this precaution is not taken. On the end of the tape is fastened a ring made of metal. This ring is left far outside the wound, making it impossible to forget the so-called sponge, which is really not a sponge but a folded piece of gauze.

"I can assure you, Ted, that in operations nowadays every possible means is used to assure cleanliness and safety. The results prove this, as a large percentage of all operations are successful these days.

Medical Discoveries Lengthen the Life Span

"I am sure I am not bragging about my profession when I say that medical men have contributed enormously to the health of the world. Scientists have fought a victorious fight against disease. Diphtheria, typhoid, scarlet fever, rabies and smallpox are preventable by means of vaccination and modern health methods. Other diseases, too, are being conquered. Pernicious anemia, the deficiency of red corpuscles in the blood, has for years baffled medical men. Now it has been discovered that this deficiency can be corrected by eating the tissues of calf, chicken, sheep or beef liver.

"The fact is, Ted, that the advances toward maintaining a healthy people are marvelous. Back in the sixteenth century the average life of an individual was only 21 years. According to the United States government records, published in 1921, the average length of life is now 58 years, and it will undoubtedly increase. Emphasizing the importance of pure food and water, annual health examinations arousing increased interest in personal hygiene and in protective inoculation and vaccination have all contributed to this remarkable increase in the average length of life.

"Because the hospital is a place where many of these contributions are daily made possible and where ill people are daily restored to health, I wanted you to visit this institution."

As he thanked Dr. Smithson for his kindness, Ted realized that a new world of knowledge had been opened up to him.

(To be continued)

Progress of Obstetric Knowledge in America

In Which Medicine Answers a Challenge

By
ALDINE R. BIRD

THE ADVANCE of modern obstetric knowledge along three principal lines, together with the gradual improvement in feminine physique, is the reply of the medical profession to the challenge that the United States has too high a maternal mortality rate and the general question as to what is being done to reduce it.

At least, this was the spoken conviction of a man who had done as much if not more than any other obstetrician of his day to advance the science of that profession. As obstetrician-in-chief of Johns Hopkins Hospital for more than a quarter century, Dr. John Whitridge Williams had built an enviable reputation throughout America and Europe for his sympathetic understanding of physical motherhood. His untimely death about a year and a half ago, at the age of 65, cast a regretful shadow across the maternal world in which he had become a leading figure.

On several occasions I had discussed at length with Dr. Williams the subject of physical motherhood today as compared with that of a generation or two ago, and on each occasion he emphatically but conditionally credited modern young women with making better physical mothers than their mothers or grandmothers did, only so far as their first babies were concerned. If the modern young woman does not have her first baby before she is 24 years of age, he declared, she loses the advantages that modern obstetric knowledge and improved feminine physique offer, and she will fare little better than her predecessors.

The part the medical profession has taken in the general effort to reduce mortality among mothers has been the progress of obstetric knowledge and, as summed up by Dr. Williams, has been along these general lines: (1) the development of asepsis, with consequent reduction in mortality from puerperal fever; (2) the extension of prenatal care, and (3) improvement in operative technic, made possible by anesthesia and asepsis.

In explaining one angle of progress by his profession in reducing the maternal mortality rate, Dr. Williams made the following statement: "When I graduated from Johns Hopkins University Medical School in 1886, any claim that a surgeon had performed even five cesarean operations in a year would have been ridiculed as preposterous. Yet we now perform from thirty to forty of these operations each year with a minimum of risk.

"The extension of prenatal care has likewise contributed much to the progress already made in reducing the mortality rate. When I was a boy, the usual custom was to summon the family physician at the last moment. He arrived just in time and no doubt did the best he could. But he knew nothing of previous developments, and the chances were all against the mother.

"Suppose, for instance, when the doctor arrived at the urgent summons, he found that the baby was too large for natural birth. What then? He was sometimes faced with the absolute necessity of losing one or both lives, and more than once he lost both. But today the expectant mother consults her physician early in the case. He examines her thoroughly, measures her precisely and continues close observations until confinement. He then knows approximately what will occur at childbirth. If his conclusions indicate that the child will be too large for normal delivery, he summons the mother to the hospital while she is still in normal condition, and a few days before her expected confinement, he performs a cesarean

operation. Within half an hour the mother has a perfectly born child, and she knew no pain."

Perhaps the most significant advancement in modern obstetric knowledge is the development of asepsis; that is, the reduction or elimination of danger from septic or blood poisoning and the tendency to putrefy. The result of this advancement has been an appreciable reduction in deaths from puerperal fever and other complications.

"While modern obstetric knowledge and experience along these lines have been greatly expanded during recent years, a great deal depends on the modern young woman—whether she takes advantage of all the opportunities now afforded her and how well she preserves her body—as to what degree of success she will have in becoming a mother," Dr. Williams pointed out with emphasis.

"Our records in this hospital clearly indicate that the woman who is sparing in physical exercise, who watches her diet during pregnancy and who becomes a mother before reaching 21 years of age, will have an excellent chance of normal delivery; likewise she will greatly assist the obstetrician in satisfactorily applying his modern knowledge and extended experience. But despite this known advantage of early motherhood, the average woman in the upper walks of life rarely marries until she is around 25 years of age, and pays for it by longer, although not necessarily more serious, first labor."

The degree of success in childbirth also varies with physical build, according to extended observations at Johns Hopkins. While it may be contrary to popular belief, the fact remains that if the woman is heavy set, with thick arms and legs, and weighs 150 pounds or more, she will have greater difficulty with her first child than the girl who is tall and spare, who looks a bit frail, who is shy of strenuous exercise and sparing of dissipation, and who may weigh even less than 110 pounds.

"As the girl grows old," Dr. Williams declared, "these complications increase, owing to the gradual hardening of the body muscles, which results from hard work and possibly from vigorous exercise. Strenuous exercise is not a desirable thing as an aid to motherhood. In nearly every instance the results of the athletically inclined mother in her first labor have been less satisfactory than those of the girl who has been sparing in physical exercise.

"Quite contrary to belief, the Negress has the odds heavily stacked against her in competing with white girls in childbirth. Figures show that the white girl has almost a 2 to 1 advantage over the Negress. In the 1927 vital statistics announcement from Washington, the puerperal death rate for Negroes was 11.3 per thousand live births, as compared with the white rate of 5.9.

"In the big cities, obstetricians have found that the Negress is imperfectly nourished, with a development of rickets. Her condition at the time of confinement too frequently is such that normal delivery is impossible. Records at Johns Hopkins show that five cesarean operations are performed on Negro women for every one on white mothers. Can deaths under these circumstances be attributed to mishandling on the part of obstetricians?"

Asked whether the higher casualty rate for the Negress throughout the country is due, at least in part, to the fact that the Negro cannot afford the same care as the white mother, Dr. Williams replied: "Here in this hospital, and I think it is a reliable index, the Negro mother has identically the same doctors, nurses, instruments and treatment as does the white mother, yet the result in the case of the Negress is generally worse. It is undernourishment and lack of understanding as to proper self care that causes Negresses to suffer more than the white women do.

"For that matter, compare the white women of this country with the Scandinavians. There

is almost the same ratio between these two peoples as there is between the American white and Negro women. We have not yet been able to account for the Scandinavian superiority, although it is generally believed to be due to body structure and different methods of living. Here in this country our race stock is so mixed and crossed that it is difficult to sort it into any classification."

Dr. Williams found that the modern young woman is better physically and makes a better physical mother than her own mother did a generation ago. One of the first evidences of this improvement in feminine physique is the virtual disappearance of the traditional bed-ridden "auntie" so common to homes a generation back as well as of women of middle age, sitting about the firesides with caps on their graying heads.

"The modern woman between 35 and 40, as I have found her, is just about in her prime, physically, taking an important place in the business and political world, or raising a family," he went on to say. "There is no doubt in my mind that she has developed her body with the advent of more sensible clothing; certainly she has increased her capacity for safe child delivery. Then, too, there is an improved mental attitude in the mothers of today, because more of them are nursing their babies than ever before. You know, prior to the French revolution, women seldom nursed their offspring but retained a wet-nurse if they could afford it."

Dr. Williams was born in Baltimore, Jan. 26, 1866. His father was Dr. Philip C. Williams; and his grandfather, who came to Baltimore in 1820, and his great grandfather were both noteworthy physicians. Young Williams graduated from Johns Hopkins University at the age of 20 with an A.B. degree and became professor of obstetrics in the same university in 1895 at the age of 27; he was named obstetrician-in-chief in 1899. He attended several European universities to complete his medical training.

In 1913, Dr. Williams was elected president of the American Gynecological Society and served one year; in 1914 he was named president of the American Society for Study and Prevention of Infant Mortality and served two years; he was elected honorary president of the Glasgow (Scotland) Gynecological and Obstetrical Society in 1911 and served one term. He is the author of a textbook on obstetrics which he wrote in 1903; the sixth edition of this widely accepted textbook was published in 1930.

After thirteen years of service as dean of the Johns Hopkins University School of Medicine, Dr. Williams tendered his resignation in 1923 in order that he might devote his full attention to directing the destinies of the new Women's Clinic and his obstetric work.

There was nothing distant about the man. He was genial and made the caller feel at home instantly with an almost affectionate handshake and salutation. Despite his long experience and advancing age, he stood erect, his eyes were keen and his voice was convincing of cordiality and sincerity.

The prescription he left for the future mothers of America to follow, if they are to assume their portion of the responsibility in reducing the present maternal death rate, reads like this:

"My advice to the modern young woman seeking full advantage of modern obstetric knowledge is not to participate in more than a moderate amount of swimming, hiking, horseback riding, tennis and other such activities that require vigorous body movements because they toughen the muscles, and the extremes of these activities are actually harmful. Nature did not intend the expectant mother to be muscle-bound, and since those muscles will not relax at her delivery, the result, in most cases, will be unsatisfactory. Of course, outdoor exercises, sanely taken, are helpful.

"See an obstetrician early in each case, for the importance of prenatal care cannot be overestimated. He will take care of the rest."

Thompson Photo

William Harvey, physician to the first two Stuart kings of England, solved the riddle of the circulation of the blood. (From an engraving by John Hall.)

The War *Against* Heart Disease Still Rages

By Phyllis B. Koehler

IF PROVIDENCE, the capital city of Rhode Island, the population of which is 253,000, were to be wiped out, the number of deaths would be the same as that resulting from cardiac or heart disorders in the United States registration area in the year 1930. For the following twelve months, the New York City department of health alone reported 18,700 mortalities resulting from cardiac diseases; this figure is twice as great as the number of deaths caused by pneumonia and three times as large as the number caused by tuberculosis. Every year heart disease has claimed a mounting toll until in 1930 it killed 213.5 persons per hundred thousand, or one-third more than in 1920.

Staggering as this increase at first appears, it is no exception to the familiar adage that "every cloud has a silver lining." It, too, has its sunny side. In the various age groups a definitely cheerful turn is being evidenced. Deaths from rheumatic fever are fewer. Deaths resulting from syphilis can be diminished, and the degeneration or breaking down of the heart muscle occurs largely in old age. The rate among young people is decreasing despite the fact that the majority of the fatalities, which happen after 60 years of age, are augmenting. This, whether it is because of a possible lowered incidence of rheumatism or on account of better care during acute attacks, seems to indicate progress.

But man still has much to learn about heart disease. Just as he perfected his tools and invented machines to perform almost any task, so too has he improved on his way of living. Confronted with problems of sanitation, he discovered means of combating the rapid spread of disease, and medical science advanced with seven league boots. Dreaded smallpox can be vanquished by vaccination. Hygienic handling of milk and water supplies in addition to vaccination have helped to check typhoid. Diphtheria may be guarded against by inoculation. Even deaths from tuberculosis are declining. Yet all the while, heart disease in its varied forms has been opposing man's efforts to suppress its steady advance.

Before expanding on the brighter aspect of this seemingly tragic rise of heart ailments, it is well to consider two changes which are interesting in their relation to the modern mode of life. Whereas formerly cardiac afflictions struck down more women than men, recent figures of the New York City department of health show an increased death rate among men over 25 years of age except, strangely enough, between 35 and 39, while a decrease is shown for women under 60. Although a few of these casualties undoubtedly came from rheumatic fever originating during childhood and still others may have been the result of a syphilitic infection, Drs. Lewis Conner and Evelyn Holt found many sclerotic (hardening) changes in the branches of the arteries in the heart during early middle age. In the 287 investigated cases of coronary thrombosis or plugging of a blood vessel of the heart by a clot, one out of three patients experienced the first attack before the age of 51 and 75 per cent before 61. Of these, 85 per cent were men. The two investigators then concluded that the onset was between 40 and 60 and that five years later only 15 per cent of the patients were well enough to

enjoy a normal life. Setting 60 as the time when "old age creeps upon one," it would then appear as though the degeneration of the heart began in many instances prematurely. This may be attributed in part to the average man's life. Fettered by the economic needs of his family, his existence becomes one constant attempt to satisfy them. He works hard and plays little. The worry and strain of business will subject men to tremendous mental and emotional pressure.

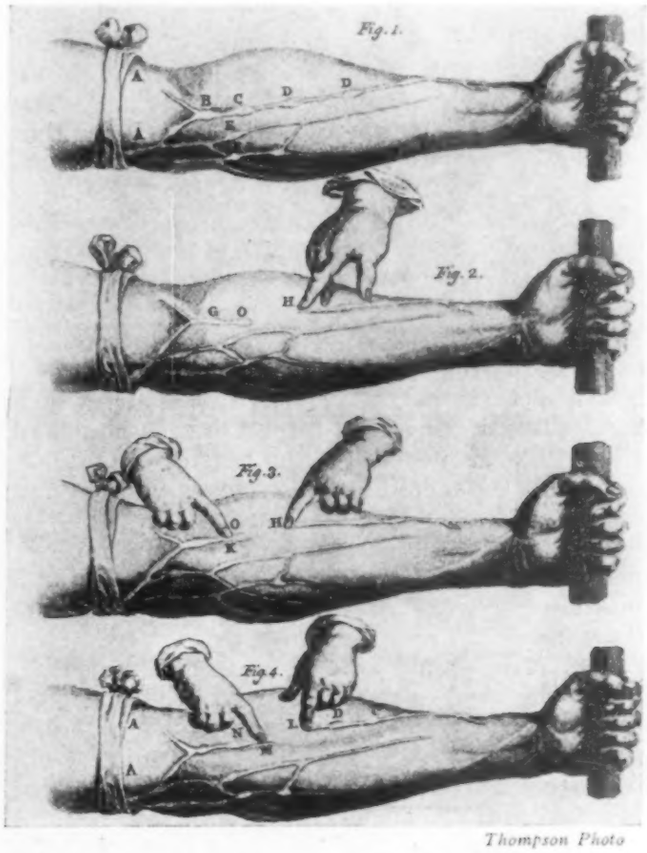
The second shifting is in the higher death rate recorded for cities as opposed to that of the rural districts. In Chicago the rate has practically doubled since 1905, but it still is less than in New York City where heart trouble is responsible for every fourth demise and where the rate has increased 25 per cent within the last decade. This is all the more striking when one knows that the rate for New York State as a whole shows a decrease of 9 persons out of every hundred thousand during the period from 1928 to 1930.

Is this an indictment against urban life? Doctors judge the case differently, but city life is geared to top speed. Relaxation is rarely adequate and frequently impossible. Mr. City Dweller's day is one incessant hustle and bustle. Tooting automobiles, massive trucks, scurrying men and women, all striving to reach their destinations, make the very act of crossing the street an ordeal. Social engagements in the evening shorten his hours of sleep; and his heart, which has been laboring hard throughout the day, is now cheated of much of its well earned rest. Moreover, Mr. City Dweller has rare and often too brief vacations; then in an attempt to cram a year's exercise into two weeks, he overburdens his heart. Poor habits of living, unfortunately so prevalent in the city, are liable to harm the human pump. Overeating and excessive drinking and smoking—habits peculiar to many men under strain—are injurious. The close contacts of the city expose people to infections which may damage the heart directly or indirectly. The country, on the other hand, offers a quieter existence where one is not herded into subways or jostled about in crowds but can enjoy simpler activity and clean air.

The storm clouds now gather dark and foreboding as one finds that every seventh death in the United States last year was due to a cardiac ailment; but they dissipate, assuming a lighter and less threatening form, with the realization that most of these were deaths of old people. For since the conquest of disease has lengthened the life expectancy, there are many more persons who live to die of "old age," with which is associated degenerative heart disease, which is accountable for half of the total mortalities resulting from cardiac ailments. In addition, superior knowledge now diagnoses as circulatory those disturbances which previously might have been otherwise classified.

Derangements of the circulation originally came to be recognized as manifestations of heart disease following the experiments of William Harvey, physician to the first two Stuart kings of England. Through his courageous and detailed studies, the riddle of the circulation of the blood was solved. Harvey endured the ridicule of his neighbors and even dared to sequester a corpse on which he might trace the course of the blood stream, ultimately to produce the long sought answer which won for him the honor of all Europe. Prior to Harvey's observations, there had not been any conception of a continuous flow of blood or of the heart as the driving power behind the ceaseless movement. He proved that the arteries, the vessels carrying the blood away from the heart, conveyed oxygen and nourishment to every part of the body, and that the impure blood was returned by another set of tubes, the veins, to the heart and thence to the lungs, where it was purified. Harvey especially stressed the dependence of the circulatory system on the heart.

Steadily building on Harvey's firm foundations, doctors with their fuller knowledge are acquiring information which, they hope, will enable them to make surer inroads on this common enemy. It is, however, encouraging to note the decided decline in the death rate from heart disease among young people under 25



Thompson Photo

Models used by Harvey to demonstrate circulation.

Ewing Galloway

The city dweller's day is one of incessant hustle and bustle.

years of age, while for children under 15 the percentage of decrease has risen well over 50. This lowered mortality of which most persons are completely unaware may, as already mentioned, be accounted for by a possible decrease in the number of children afflicted or by timely and accurate recognition followed by persistent care, for it is actually a case of a stitch in time saving nine. The initial attack of rheumatic fever answerable for heart trouble in children is generally evidenced after 5 years of age. The infection may permanently injure the heart, but its progress may be impeded by continued supervision of the child's daily regimen. He may within certain physical limitations, depending on how extensively his heart has been affected, live many happy and profitable years.

All these facts undoubtedly provoke the query, What sort of a machine is this human pump, and what is heart disease?

This devastation proceeds from injuries to a small pump, not much larger than a clenched fist. The four muscular chambers of the human pump are separated by four valves which open and close as the blood is forced through. Its perfect performance depends on the proper functioning of these valves as well as on the muscular squeeze of its walls. Normally the heart beats 72 times a minute, driving from 4 to 16 quarts of blood into the arterial reservoir. It absorbs food and oxygen with which to feed its own muscle and to replenish its strength. But like all efficient machines, it requires not alone fuel but also an occasional readjustment; therefore, after each contraction or beat it relaxes. These rest periods equal about thirteen hours, slightly more than half the day; when the pump is called on to beat faster, this time in which energy is stored is shortened. Though the heart can work at a rapid pace for considerable periods, excessive exertion undertaken without adequate training and relaxation may seriously damage the heart.

Next, what sort of a disease is it that injures the heart? Heart disease is not an isolated illness. It can be divided into two categories, congenital and acquired. The congenital deformities, those present at birth, are probably the source of only 5 per cent of the cardiac conditions among children. The acquired defects are the result of many different diseases of the heart muscle or valves. The heart may be variously afflicted, but it must be remembered that no matter how slight the injury, it cannot be entirely repaired, for if the muscle deteriorates it is impossible to replace it with new muscle; and if the valves become scarred, no fresh tissue can be grafted to replace it. However, through orderly living and the necessary management and care and especially through a compensation of nature, the heart though handicapped can "carry on."

The heart's worst assailants are rheumatic fever, syphilis, chronic infections and arteriosclerosis.

Rheumatic fever, which is a common disease among children, is particularly difficult to detect at its onset; hence it often passes unnoticed. It is both infectious and recurrent with symptoms sometimes mild and then again severe; during its acute attacks, lasting from a few days to several months, the heart is endangered. The infection is believed to originate from a germ, as yet undifferentiated. Whether or not it

enters the body through some focus of infection has not been established; but any condition, such as decayed teeth, bad tonsils, adenoids or a chronic sinusitis, that tends to lower the general resistance should be removed. The disease attacks both muscle and valves; whereas the muscle, though scarred, may eventually recover part of its normal efficiency, the valve changes are permanent mechanical defects. Scar tissue is formed around the aperture, which narrows and hinders the closing, thereby obstructing the onflow. There is then, also a lack of proper contact of the edges of the valve, and a leakage backward ensues. Part of the blood flows back into the chamber from which it should have emptied. To counterbalance this leakage and to drive the blood through the narrowed opening, the chamber must enlarge, and frequently the heart becomes enlarged; this is Nature's method of compensating for the decreased efficiency of the valve. Rheumatic fever, according to the doctors, causes 90 per cent of the heart trouble in young people. At least three fourths of the children with rheumatism later develop organic heart disease. About 35 per cent of all the deaths from heart disease are due to rheumatic infection.

Another infection that affects the valves and muscles is syphilis. It similarly leaves scarred and leaking valves, damaging the blood vessels and indirectly harming the muscle. Syphilis does not strike immediately. Twenty years may elapse between its onset and the cardiac involvement; then it mows down men and women in their full maturity when they should be economically most productive. By stamping out this preventable and unsocial disease, one tenth of the entire heart fatalities would be completely eliminated.

About half of the heart ailments, however, are the result of arteriosclerosis, or hardening of the small arteries which supply blood to the heart. This degeneration is brought on by age. Everybody's arteries harden after middle age, and the narrowing and thickening of the little vessels of the heart, the coronary arteries, form but a part of the general process going on throughout the body. Its advance fortunately is gradual and seldom ends in heart failure in its early stages. When the arteriosclerosis of the small arteries of the heart has reached the point where the heart muscle receives an inadequate blood supply, exertion is accompanied by shortness of breath or pain or both. Pain in the left portion of the chest during effort will also be felt when one of the little branches feeding the muscle of the heart is constricted. Or again the arteries may be so narrowed that a clotting of blood in a large one would bring sudden death.

Other conditions may cause heart disease. Any germ or toxin settling in the heart will injure it. Among the conditions that may bring about a cardiac disorder can be enumerated scarlet fever, pneumonia, influenza, diphtheria, typhoid and gonorrhea. Thus degeneration of the heart muscle follows an overactive thyroid gland, commonly known as goiter. Not only does its secretion poison the tissue, but the pump also receives incessant stimulation from which the fatigued muscle never gets a chance to recuperate.

Kidney disease and high blood pressure may likewise damage the heart if the arterial branches feeding its muscle have been affected by arteriosclerosis. The symptoms will be similar to those of hardening of the arteries owing to age, but with high blood pressure the pump must work against an increased pressure in the vessels, which means that it must augment its strength to meet this demand. This compensation will not be possible when the muscle has already undergone considerable deterioration.

Bad habits of living are often blamed for heart disease. I have already mentioned that bad habits unquestionably cause a certain wear and tear which without the rest and time required for recovery are dangerous. Little sleep, overexertion without proper training, lack of exercise necessary to keep any muscle fit and the imperfect elimination of body poisons can all be marked down as detrimental. Alcohol, when taken as a steady diet or imbibed to excess, is harmful and weakening to the system. Tea and coffee in large quantities are also bad, and indiscriminate smoking has been condemned by many physicians. As good care prolongs the life of any motor, good living will help to keep the human pump in fine repair.

Heart disease should then no longer be regarded as an overpowering menace. The advance of old age cannot be stopped; the deaths which follow in its wake cannot be eliminated. Attention should, therefore, be concentrated on the child. If his case is detected early, if he conscientiously pursues the doctor's instructions and lives according to his physical capacity, the number of fatalities among young people may continue to be even more definitely decreased. At the Rockefeller Institute in New York City, experiments are being conducted in an attempt to isolate the probable germ of rheumatic fever. Convalescent homes the country over and clinics for heart disease in the city hospitals are studying methods of treatment which it is hoped may be beneficial. In a few years the doctors may have accumulated sufficient information which, added to the present possible lowered incidence and better personal hygiene now partly accountable for the decreased rate, will enable them to curb further onslaughts of this public enemy and to provide a fuller enjoyment of life for those whose hearts have been injured. Here is the most gigantic obstacle that man has yet to conquer before reaching his goal, long life and health.

The Eruption of the Teeth

By GEORGE H. WANDEL

THE QUESTION of the retention of a child's first set of teeth and the time at which these teeth should be lost to make room for the permanent teeth is one that frequently causes confusion in the minds of many parents.

The accompanying tables show the approximate ages at which the first and second sets of teeth make their appearance in the mouth. Of course, the ages designated in these tables are approximate, and in individual cases there is a wide variance from the ages listed.

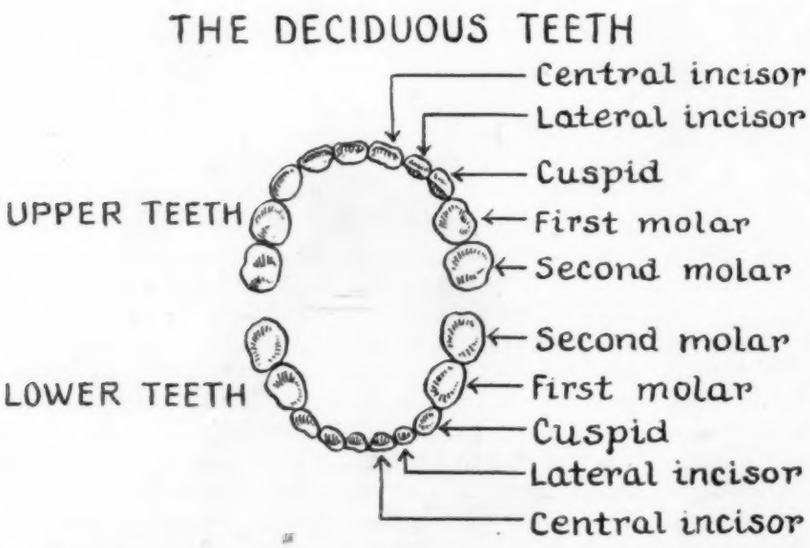
Under normal conditions all the child's temporary teeth are shed and are replaced by permanent teeth. This loss of the temporary teeth and replacement by permanent teeth is a gradual process, starting at about 6 years of age and ending at approximately 12 years. By comparing the two charts and noting the ages of eruption for the first five permanent teeth listed, a parent may obtain a fairly accurate idea as to when the corresponding teeth in the temporary set should be lost. For example, the central incisors erupt at about 7 years of age, as shown in the chart for the permanent teeth. Naturally then, the temporary tooth which the permanent incisor replaces must be shed by that time.

Carrying this study further and applying it to a child of about 10 years, one may note from the chart of the permanent teeth that the 10 year old should have all his permanent central incisors, lateral incisors, first bicuspids and possibly his second bicuspids. Since there are two of each of these teeth in each jaw, or a total of four for both jaws, one can see that the child should have at least twelve and possibly sixteen permanent teeth at the age of 10. Since there are twenty temporary teeth to be replaced by permanent teeth, one readily deduces that the child should still normally retain four of his temporary teeth. At that age, the temporary teeth still retained would be the cuspids, that is, the eye-teeth and, the stomach-teeth, as the chart indicates.

It will be noted that the chart for the permanent teeth states which temporary teeth are replaced by permanent teeth. It will also be noted that certain permanent teeth do not replace any temporary teeth. This is readily understood when it is realized that there are only twenty teeth in the temporary set while there are thirty-two teeth in the permanent set.

There are several points that should be understood in connection with the shedding of the temporary teeth. First of all, this shedding process is a normal physiologic occurrence. It takes place as the result of the absorption of the roots of the temporary teeth. As the roots absorb, the natural anchorage of the teeth is gradually lost and the teeth loosen, finally becoming so loose that they must be removed. The absorption of the roots of the temporary teeth is apparently stimulated by the presence of the crowns of the permanent teeth that are growing underneath.

For one reason or another it often happens that the temporary teeth are lost too soon. This occurs almost always as a result of neglect and accompanying decay, which may end in a toothache or an abscess

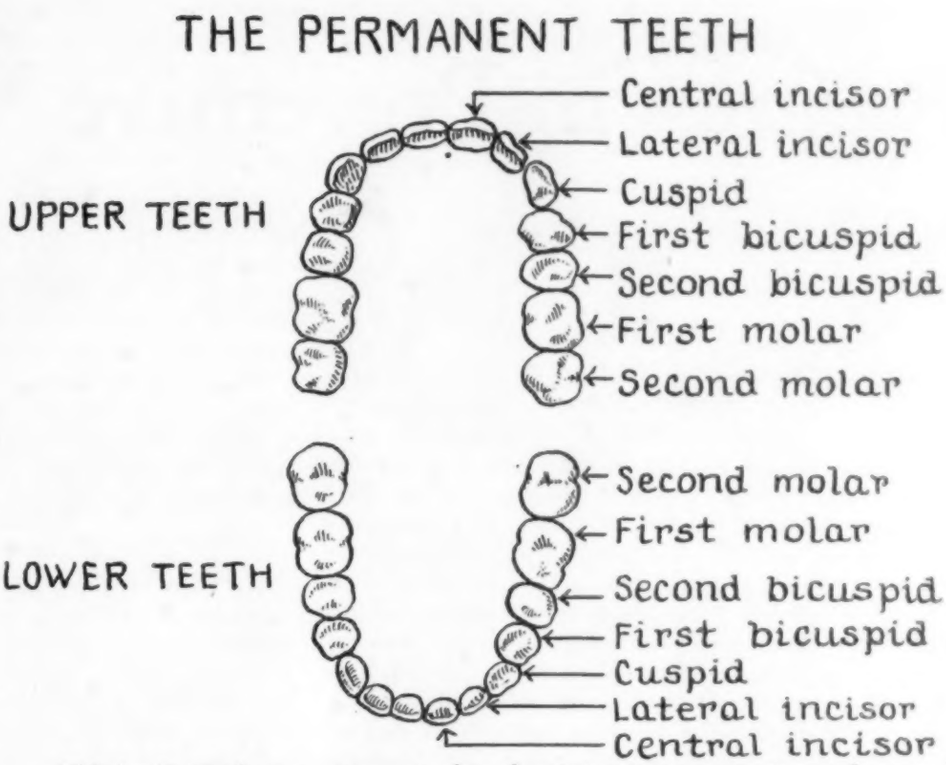


AGE AT WHICH TEMPORARY TEETH ERUPT

Central incisors	4-9 months
Lateral incisors	7-10 months
First molars	12 months
Canines or cuspids	18 months
Second molars	2 years

that necessitates the extraction of the offending tooth. If a temporary tooth is lost in this manner long before it should normally have been shed, there is usually a shrinkage of the bone in that area or a tipping or tilting of neighboring teeth which does not allow sufficient room for the permanent teeth to come in straight. Many cases of crooked teeth are caused in this manner.

Instead of too early loss of the temporary teeth, occasionally there are cases in which the temporary teeth have stayed in too long. Either the teeth have loosened, and they have not been removed to permit the normal eruption of the permanent teeth, or, for some reason or other, the teeth never loosened and a dentist was not consulted to determine what should be done. Too long retention of temporary teeth may result in crowding of the permanent teeth or may cause certain of the permanent teeth to fail to erupt at all.



ERUPTION OF PERMANENT TEETH

Teeth	Age (approximate yrs.)
Central incisors replace temporary central incisors	7
Lateral incisors replace temporary lateral incisors	8
First bicuspids replace temporary first molars	9
Second bicuspids replace temporary second molars	10
Cuspids replace temporary cuspids	11 or 12
First molars do not replace temporary teeth	5 to 6
Second molars do not replace temporary teeth	12
Third molars do not replace temporary teeth	18-25

However, parents must remember that children do not all cut or shed their teeth at the same ages. One child may get his permanent teeth several months ahead of another child of the same age. But it must be remembered that there are children in whose mouths one or several temporary teeth have not been loosened and have not come out as one would normally expect.

Of course, in such circumstances the wisest procedure is to consult a dentist and ask him to take x-ray pictures of the areas in which the offending teeth are situated. The x-ray pictures will enable the dentist to make a proper diagnosis and determine the best procedure in taking care of the situation. They will show (1) whether a permanent tooth has formed that could take the place of the temporary tooth if it is extracted and (2) the position of the permanent tooth and whether or not it can be brought into the space being occupied by the temporary tooth.

Any firmly attached temporary teeth that are present in the mouth long past the time for shedding should not be removed until after an x-ray examination has verified the advisability for extraction.

When extreme conditions of early loss or long retention of temporary teeth exist, the opinion and cooperation of an orthodontist, a dentist who specializes in the regulation or straightening of children's teeth, and of a pediatrician, a physician who specializes in diseases of children, would seem a wise procedure. Through such joint study of the case, thorough analysis and diagnosis are possible, and reliable corrective procedures may then be successfully instituted.

Progress in Preventive Medicine

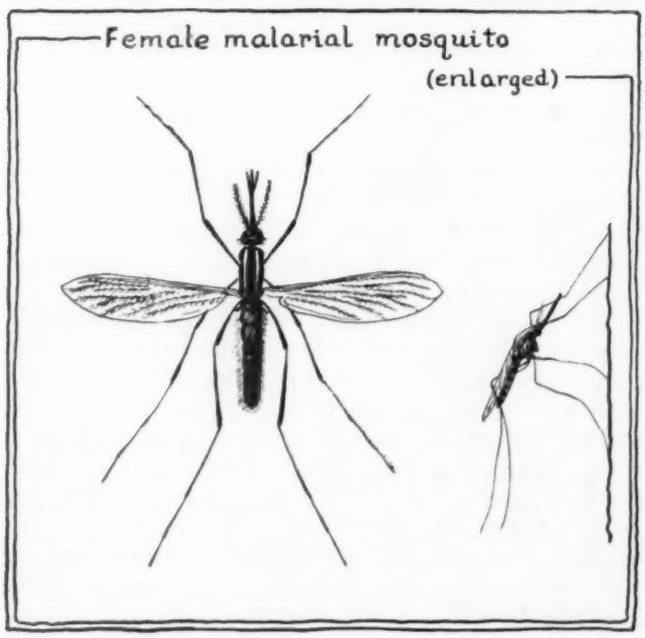
By P. M. Ashburn

PART III

IN MAY, 1893, George M. Sternberg, an American pioneer in bacteriology, was appointed Surgeon-General of the U. S. Army. It was a sort of official recognition of the new medicine, and it had a wider influence than that usually attending the appointment of a surgeon-general. It added to Sternberg's scientific standing the prestige of a distinguished office and enhanced his later positions as President of the American Medical Association and the American Public Health Association. It enabled him in 1893 to establish the Army Medical School, one of the earliest American schools of public health, and to interest the easy-going Medical Corps of the sleepy old army in the new medicine, to prepare it for its triumphant accomplishments in Cuba, Porto Rico, the Philippines, Panama and the home stations. These were accomplishments which did more to popularize disease prevention in America and perhaps in the world than anything else in the first two decades of the present century. However, there was some distance to travel before that point was reached; much was yet to be learned from the Old World.

Manson Correlates Malaria and Mosquitoes

In 1894, Bruce of the Royal Army Medical Corps discovered the trypanosome, a flagellated protozoal parasite, living in the circulating blood of animals suffering from nagana; Rouget found another trypanosome in dourine of horses, and Kitasato and Yersin described the bacillus of plague. In the same year Patrick Manson, who had previously described the transmission of blood filariae by mosquitoes, in studying the parasite of malaria was impressed by the fact that certain forms of the parasite sent out actively mobile, whiplike processes or flagella, which finally broke free from the parasite and wandered lashing among the blood corpuscles.



Puzzles and Parasites

He also noticed that this occurred only after the blood had been drawn from the body and had had a chance to cool somewhat. Others had noticed the same thing but had considered it a sort of death agony of the parasite or had been unable to explain it. Manson, however, had one of the great minds of modern medicine. He did not think that it was an evidence of death but rather an effort at greater life. He knew that the parasite of malaria in the blood multiplied there by segmentation, but he also knew that the disease did not pass directly from man to man, that it was not contagious. On the other hand, it was a place disease, one acquired by visiting or residence in certain places, especially in warm and swampy regions. He argued acutely that the flagellation of the malaria germ after it had left the body was a preparation for taking up another phase of life in a nonhuman host, probably an insect, probably the mosquito.

As he was living in England, where there was no malaria, he advised medical officers in India to investigate the matter as an interesting and important piece of research. Manson's article was such a masterpiece of observation and reasoning that it profoundly impressed Ronald Ross, a young officer of the Indian Medical Service, and he took up the work in 1895. Ross fed and dissected hundreds of mosquitoes fed on malarial blood and found the malarial parasites flagellating in their stomachs but could find nothing more until August, 1897, when in the walls of the stomachs of two "dappled winged mosquitoes" he found peculiar cells, differing in appearance from other cells of the stomach wall and containing pigment granules "indistinguishable from those of haemamoeba" of malaria. He admitted that "it would, of course, be absurd to attempt final conclusions as yet"; but he considered that they might "open the question of their being" the alternative form in the mosquito of the parasite of malaria "in man."

In the following year, 1898, by studying so-called malaria of birds, a disease caused by a blood parasite much resembling that of human malaria, McCallum of Johns Hopkins Medical School worked out its complete life cycle in the mosquito and transmitted the disease to healthy birds by the bites of infected mosquitoes. Ross confirmed McCallum's work, and in July, 1899, he announced that the research was "now practically complete" and that malaria was transmitted by mosquitoes of the genus Anopheles.

Typhoid Threatens to Conquer the Camps

By that time the United States had won the Spanish-American War and gained the Philippines, Cuba and Porto Rico, but had narrowly escaped defeat in Cuba by malaria and yellow fever, in addition to having its army ravaged at home and abroad by typhoid. We were in possession of far-flung and disease-ridden tropical lands but with no experience and little knowledge of tropical diseases. But even more pressing at first because nearer home, getting more publicity, touching more people and exciting more criticism were the great typhoid epidemics in the camps. Although an epidemic in England had been attributed to milk some years before and although one or two writers had warned of the possibility of typhoid transmission by flies, it was a generally accepted belief that the disease was wholly water-borne, and the great epidemics were looked on as proof of neglect of the purity of camp water supplies.

A board of medical officers studied the epidemics extensively, shed new light on the epidemiology of the disease, showed that in the camps typhoid was not related to the water supplies and explained that flies, dust and contact with the sick had served to spread it. The board did not recognize the importance of spread through apparently healthy carriers and through those in the incubation or convalescent stages of the disease who were on duty in the company kitchens; furthermore, the board did not furnish additional information that might enable the British to avoid the same sad experience in the Boer war. Neither the medical profession nor the public was yet educated to the point where they could greatly reduce typhoid.

Confronted by great amounts of tropical diseases in the army, Surgeon-General Sternberg appointed boards for their study in Cuba, Porto Rico and the Philippines. The results were so tremendous, especially in Cuba, as to merit discussion. Yellow fever was then raging, and it excited so much fear and it so paralyzed commerce that the Cuban board was instructed to begin its study. There were 1,164 cases in the army during 1898 and 262 cases in 1899, despite the effort to send immune soldiers to Cuba. In 1900 a great migration from Spain to Cuba supplied nonimmune material for the disease, and

it prevailed more extensively in the island than for some years past. A new germ, Sanarelli's bacillus, had been heralded as its cause, and the board, headed by Major Walter Reed, began the study of that germ. It was soon disposed of as a cause, as it was not found in any of eighteen cases, eleven of which came to autopsy. The interlocking work of other men soon put the board on the right track.

Important Steps in the Right Direction

1. The work of Ronald Ross, proving the transmission of malaria by anopheline mosquitoes, had been confirmed and was accepted by the medical world.

2. The American authorities had thoroughly cleaned up Havana without improving the yellow fever situation, thus showing that it was not a filth disease.

3. Surgeon Henry R. Carter, U. S. Marine Hospital Service, in May, 1900, published excellent epidemiologic observations showing that, although the incubation period of the disease was but a few days after an epidemic started or when nonimmune persons were exposed to the disease, no secondary cases followed the appearance of a first case in a previously uninfected community for more than two weeks. In the light of Ross' work on malaria, this suggested an insect carrier, although Dr. Carter did not suggest it.

4. Dr. Carlos Finlay, a resident of Cuba, had published his reasons nineteen years before for believing that the disease was mosquito-borne and that it was transmitted by the mosquito Culex fasciatus, later called Stegomyia fasciata and now known as Aëdes aegypti. For twenty years, Dr. Finlay had ridden this hobby, as his friends considered it, and had tried repeatedly to transmit the disease by the bites of the mosquito; he himself believed that he had done so, but he had not convinced others, and his apparent failures seemed to disprove his belief. Nevertheless, he continued to hold it. He was still alive in Havana, still trying his experiments and still breeding Stegomyia mosquitoes. He indicated the mosquito to the board and furnished its eggs. Major Reed saw the bearing on the subject of the observations made by Ross and by Carter, and the board set out to test Dr. Finlay's hypothesis in the light of these discoveries.

Heroic Volunteers

There was at the time a small epidemic of yellow fever at Quemados, and there the board began its observations in June, 1900. Attempts were made to transmit the disease by contact and discharges of patients, but all were unsuccessful. Inoculation experiments by the use of mosquitoes were begun in August. The first nine attempts were unsuccessful because, as afterward appeared, either the mosquitoes had bitten the yellow fever patient too late to get the virus from his blood or they had not been kept long enough for the completion of the development which the virus undergoes in the insect. Those negative results may have tempered any enthusiasm which the members of the board felt for Finlay's hypothesis. At any rate, when Dr. Carroll was bitten on August 27 by a mosquito which had bitten a yellow fever patient in the second day of the disease and had been kept for twelve days thereafter, he took so little interest in the result that when he became sick on the afternoons of August 29 and 30, he did not seek a diagnosis or even take his temperature. On August 31 he examined his blood for malarial parasites and found none. That evening his temperature was taken for the first time and was found to be 102 F. The diagnosis of yellow fever was made on September 1. However, there was still no proof that the disease originated from the mosquito bite. Dr. Carroll had been exposed in other ways. Nevertheless, the case was suggestive, and when a case of well pronounced yellow fever developed in a soldier who had accepted experimental bites in a spirit of unbelief and bravado, enthusiasm flamed. A few days later, Dr. Jesse W. Lazear, also a member of the board, was bitten on the hand by a free mosquito in a yellow fever ward of Las Animas Hospital, where he was collecting blood for study from yellow fever patients. He deliberately allowed the mosquito to fill itself with his blood. In five days he sickened, and in twelve days he was dead.

Observations and Conclusions

The board thereafter produced six more cases by mosquito inoculations, failed to produce any by thorough experiments of exposure of nonimmunes to the soiled clothing and bedding and the discharges from yellow fever patients, and reached the following conclusions regarding the disease:

1. The mosquito Culex fasciatus serves as the intermediate host for the parasite of yellow fever.

2. Yellow fever is transmitted to the nonimmune individual by means of the bite of the mosquito that has previously fed on the blood of those sick with this disease.

3. An interval of about twelve days or more after contamination appears to be necessary before the mosquito is capable of conveying the infection.

4. The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack.

5. Yellow fever can also be experimentally produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease.

6. An attack of yellow fever produced by the bite of the mosquito confers immunity against the subsequent injection of the blood of an

individual suffering from the nonexperimental form of this disease.

7. The period of incubation in thirteen cases of experimental yellow fever has varied from forty-one hours to five days and seventeen hours.

8. Yellow fever is not conveyed by fomites; hence disinfection of articles of clothing, bedding or merchandise, supposedly contaminated by contact with those sick with this disease, is unnecessary.

9. A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitoes capable of conveying the parasite of this disease.

10. The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes and the protection of the sick against the bites of these insects.

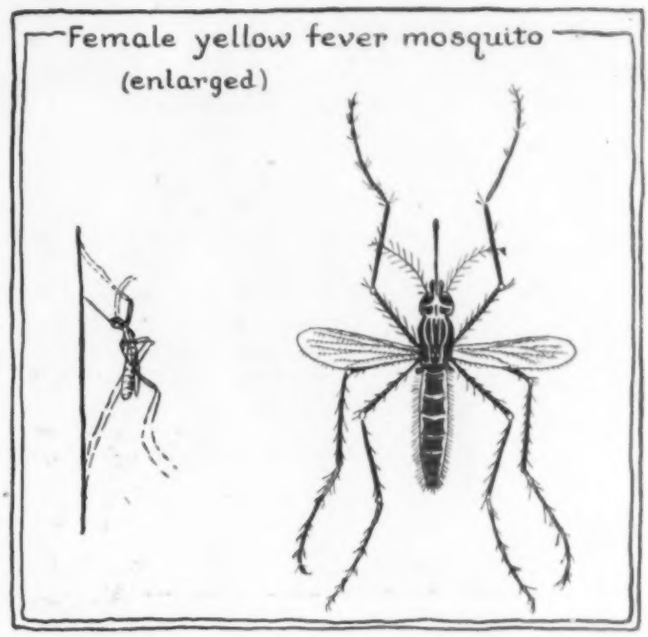
11. While the mode of propagation of yellow fever has now been definitely determined, the specific cause of this disease remains to be discovered.

Sir Patrick Manson later described the significance of the board's work as follows:

"These experiments fully explain: 1st, the impunity with which a yellow fever patient can be visited by a non-immune if outside the endemic area; the mosquitoes in the vicinity are not infective; 2d, the danger of visiting the endemic area, especially at night; the mosquitoes there are infective and active; 3d, the discrepancy between the incubation period, three to five days, of the disease, and the incubation period, fourteen days and over, of an epidemic; the necessary evolution of the germ in the mosquitoes infected by the original introducing patient demanding the space of time indicated by the difference between these two periods; 4th, the clinging of yellow fever infection to ships, buildings and localities; the persistence of the germ in infected mosquitoes, which are known to be capable of surviving for five months, and probably longer, after feeding on blood; 5th, the high atmospheric temperature required for epidemic extension of yellow fever; such temperature favors the activities and propagation of the mosquito, and is probably necessary for the evolution of the germ in the mosquito."

Declaration of War Against the Mosquito

Fortune favored medicine and the world at that time by having in control in Cuba, as military governor, Gen. Leonard Wood, a man of vision and of medical training, and as chief sanitary officer, Major William C. Gorgas, another medical man of great vision. General Wood gave to Major Gorgas every facility for the practical application of the knowledge acquired by the Reed board. An order was issued changing the method of disinfection of yellow fever houses and limiting it to the



destruction of any mosquitoes contained in them. At the same time all yellow fever patients were carefully protected from mosquitoes, so that the mosquitoes might not acquire infection from them. An active campaign of destruction of breeding places for mosquitoes was inaugurated in April, 1901.

Triumph of Education by Demonstration

Then began the education of the world in the prevention of yellow fever. Dr. Finlay, chairman of the Cuban Yellow Fever Commission, was able to report at the end of the year that there had been but thirty-seven cases of yellow fever during the year, despite the large number of nonimmune persons in Cuba, and that in ten of these cases the patients were experimentally infected. In August, 1903, the Surgeon-General of the Army reported: "Yellow fever does not now exist in United States territory, and no case has originated in Cuba for about two years, notwithstanding that Cuba during this time has had a larger nonimmune population than ever before, and that occasional cases of yellow fever have been brought to her shores from Mexican and South American ports." Incidentally the sickness rate from malaria had been greatly reduced, to one fourth of its former total. This was education by demonstration, and most of the world heeded and was impressed by it.

When it was decided to dig the Panama Canal, Major Gorgas was made chief health officer, with the rank of colonel, and he wished to apply against the mosquito-borne diseases of the Isthmus the same sort of measures that had given him success in Havana. However, he was not a member of the Canal Commission, his plans involved the expenditure of large sums of money and his superiors were not men of General Wood's training or vision; they were, instead, eminent engi- *(Continued on page 469)*

Acme

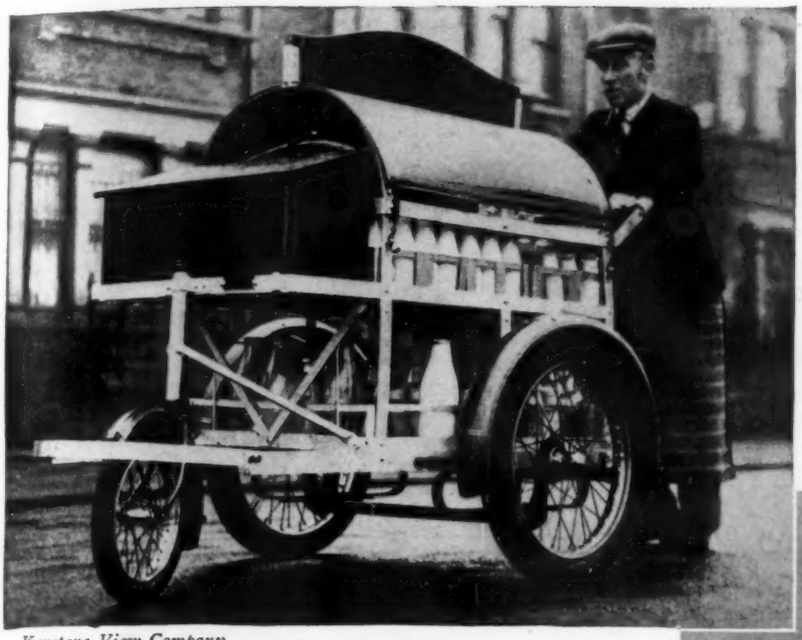
The old Baby Bunting nursery song could well be changed for Russian children from "Daddy's gone a-hunting" to "Mother's gone a-plowing." The picture below shows an army of spring plowers departing for their work.

Roy-Pinney

Politics and the proletariat mean nothing in the life of this young chap; nor does it seem to trouble him greatly that his mother is about to leave him to join the band of plow-women.

Keystone View Co.

DOCTORS TRAVELING into the interior of China are conveyed by horse and boat.



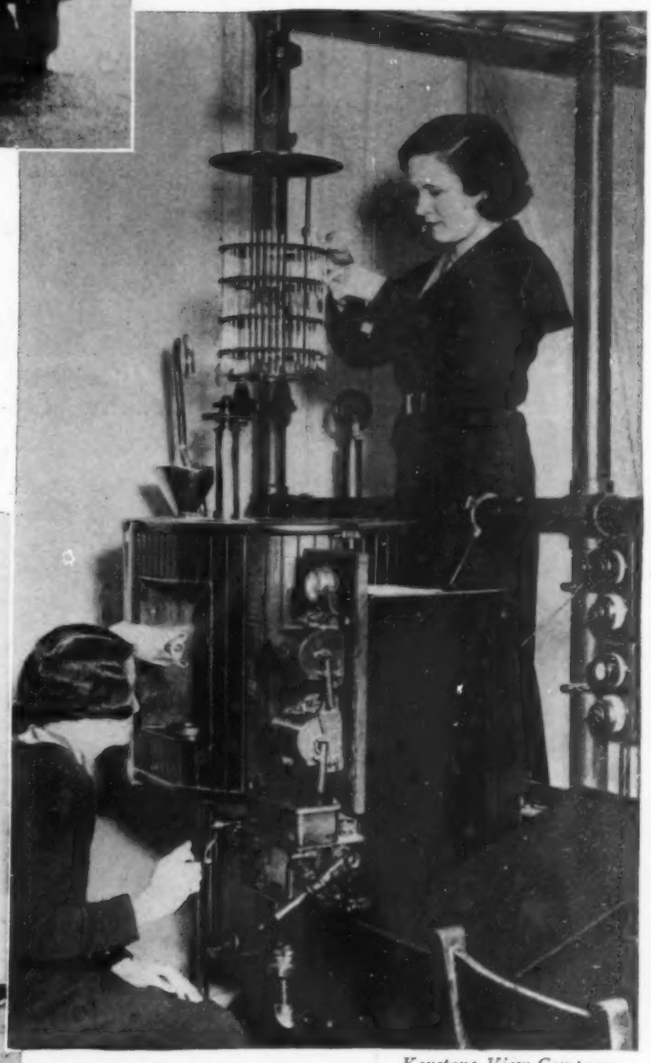
Keystone View Company

SILENCE REIGNS

No more the morning rattle of the milkman stopping at the doorstep! A new silent milk-float has made its appearance in North London. The float is equipped with bumpers, pneumatic tires and wire wheels. The milk bottles are encased in rubber to prevent them from rattling. Ho, hum, no early morning alarm clock!

TESTING CLINICAL THERMOMETERS

The odd machine to the right tests clinical thermometers. The girls are shown checking one of the "cages" of thermometers which have been tested in a water tub at 110 F. Influenza epidemics greatly increased the use of these machines.



Keystone View Company

Soibelman Syndicate

GUESS WHAT?

A church? No. A city hall? No. It's a sewage disposal system. The ornate building shown to the left is the power-house and sewage disposal station in Beverly Hills, Calif.

JUST JERRY — The Boy Who Needed A Bump

By
Vivian J. Loomis

"EXCUSE ME, girls," said Miss Williams. "Some one is standing up on one of the swings. I must go down to the other end of the playground and ask him to sit down. It's dangerous you know to pump up; besides it's a violation of playground rules."

"Can I go along, Miss Williams?" pleaded Ann.

"Yes, Ann, you may this time, but I'm asking the others to stay behind and see how much they can accomplish while I'm gone. Another time some one else may go with me."

As Ann and the new playground teacher walked along in the bright summer sunshine, Ann spoke up.

"You know, Miss Williams, I'll bet you're going to have a lot of trouble with Jerry."

"Who's Jerry, Ann?"

"The boy who's standing up on that swing. He's about the meanest boy around here, I guess, and he's not so old either. Only about 9, and every year he's worse about breaking playground rules. The last two teachers have even refused to let him on the playground toward the end of the summer. None of the other boys or girls play with him 'cause he's always up to some mischief."

"I'm sorry, but I'll have to ask you to stop standing up on the swings. Are you a new boy on the playground?"

It was good to have Ann around. She was so well acquainted with the neighborhood and was such a help. Soon the two approached the play things, and Miss Williams called out, "I'm sorry, but I'll have to ask you to stop standing up on the swings; you may so easily get hurt. Are you a new boy that you do not know the rules?"

A bit surprised that the playground teacher should think him new, Jerry sat down, only to answer as she turned her back, "No, I'm not new here, and I never got hurt either playing on these things."

It was not only once but many times that Miss Williams stopped her more interesting duties to caution Jerry not to abuse the privilege of the playground equipment. And always she talked to him just as kindly. Jerry seemed really to be an attractive lad. His big brown eyes and straight brown hair added to his boyishness. Miss Williams wondered what his smile would be like. She had never seen Jerry smile; yet she believed that it would be a real treat. There must be something wrong with a child who acts that way. She was determined to find out.

Nearly every day she tried to get Jerry to join the boys who were making kites or working on the lanterns for the lantern day parade. Most of the boys were having such fun. But no, Jerry could not be persuaded. Sometimes, however, Miss Williams seemed to think Jerry liked her just a little bit, although she had little enough reason to believe so. He was such a tease. He delighted in throwing bean bags up on the roof of the school. And sometimes he was so mean. One day he pushed a girl down on the crushed gravel, and her knee was cut. But nearly every day he stood up on the swing until he was told to stop.

Miss Williams was nearly at the end of her patience. Jerry really deserved sometimes to have a good paddling, but Miss Williams hoped to find a more effective method. He behaved no better when Mr. Rogers, the boys' instructor, was near.

Miss Williams had spent two weeks now as playground instructor, and already classes in handicraft and dancing had been organized and ball teams had started their summer schedule. The twilight games in the evening, which were under the care of Mr. Rogers, were drawing quite large crowds. Miss Williams on these occasions usually watched the smaller children.

One evening as Miss Williams was checking in the playground material at the farther end of the grounds, near the school, a boy ran up to her and exclaimed breathlessly that some one had been hurt on the swing.

"Thank you for telling me, Eddie. While I rush down there, get the first aid kit. There may be an open cut."

Quite a large group of people had surrounded the child—an indication that he might be rather badly hurt. Forcing her way toward him, she strained her eyes to see who the child was. It was Jerry.

From the numerous explanations that followed, Miss Williams gathered that Jerry had been pumping high up on the swing and had lost control. He must have hit his head rather hard when he fell.

"You two large boys carry Jerry over to the drinking fountain; keep his head raised. That's it. Ann, you go for Dr. Fredericks while I apply cold applications to Jerry's head."

Dr. Fredericks, she had been told, was always willing to help in playground emergencies. Ann could be trusted to get him, she knew.

Miss Williams turned to Jerry. He was unconscious; she hoped there was no fracture, but only an x-ray picture would tell. Some one in the crowd offered the use of his car; soon Ann returned with the doctor, and the child was taken to the hospital.

"I'm going along, Rogers," the teacher shouted. "See that all the equipment is put away, will you please?"

The x-ray films at the hospital showed that Jerry had no fracture but did have a serious concussion. The boy was later taken home.

"How are you, Jerry?" the playground teacher inquired as she went into his room the next day. "I brought a jig-saw puzzle for you to play with when you feel a bit better."

Jerry had not quite overcome the shock of his accident, but a tiny smile came over his face as he said, "I was afraid you wouldn't come."

Later in the day, Miss Williams again thought it best to see Jerry alone, although a few of the boys and Ann wanted to go along, more for curiosity than for friendship's sake. Jerry's mind was clearer, and his eyes were brighter at the evening call.

"You're looking better, Jerry. How do you feel?"

"Much better, now" was the cautious reply.

"I'm glad, because then you'll soon be back on the playground. A few of the boys wanted to come along tonight to see you, but I thought that might be too much excitement for you."

Nearly every day Miss Williams tried to persuade Jerry to join the boys who were making kites.

"Did they really? Gosh, that's funny. I haven't been very nice to some of them."

"Oh, you haven't been so bad, Jerry."

"Yes, I have, Miss Williams, and all because I didn't think they were my friends," he confessed.

"But why should you think that?"

"Well, two years ago I was sick, and when I went over to the playground I couldn't do some of the things other boys did, and they poked fun at me. I just wasn't strong enough, I guess. And after that I hated them. Wouldn't play with them and teased them when I could. It seemed then to be a lot of fun doing things I shouldn't. But later nobody cared to be friends with me. I didn't think any one would want me now."

"You're wrong, Jerry. You just see."

The next day Miss Williams told the boys that they might go to see Jerry that afternoon, and with a large bag of fruit under her arm Miss Williams and the boys went to Jerry's home and had a party. Jerry's eyes gleamed, for he was so happy.

And a few days later, as Jerry helped Miss Williams put the games away over at the playground, he said, "You know, Miss Williams, I think that all I needed was a good bump to show me my friends, and I got it."

The Little White Tooth-Brush

By
ARTHUR K.
HUDSON

"HO! HO!" cried the Big Bath Towel. "Ha! Ha!" laughed the Pink Wash-Cloth. "He! He!" snickered the Soap.

The Little White Tooth-Brush sat on the edge of the brush rack. She could not say a word. Two great tears rolled down her cheeks and fell into the wash-basin. Splash! Splash!

Little Peter had just left the bathroom. He had washed his hands with the Slippery White Soap. He had washed his face with the Pink Wash-Cloth. He had dried his hands and face with the Big Bath Towel.

But, oh dear! Peter had quite forgotten the Little White Tooth-Brush! This was the third time he had done it, too!

"Peter likes me! I'm so soft and warm," said the Big Bath Towel, puffing himself out like a sail.

"He likes me, too!" cried the Pink Wash-Cloth with a wet smile.

"Peter plays with me in his bath!" piped the Soap, sliding merrily about in his dish.

"Oh, dear!" sobbed the Little White Tooth-Brush, "why does he forget me? Whatever have I done? I love little Peter so! I work so hard to keep his teeth clean and white!" Two more tears splashed into the basin.

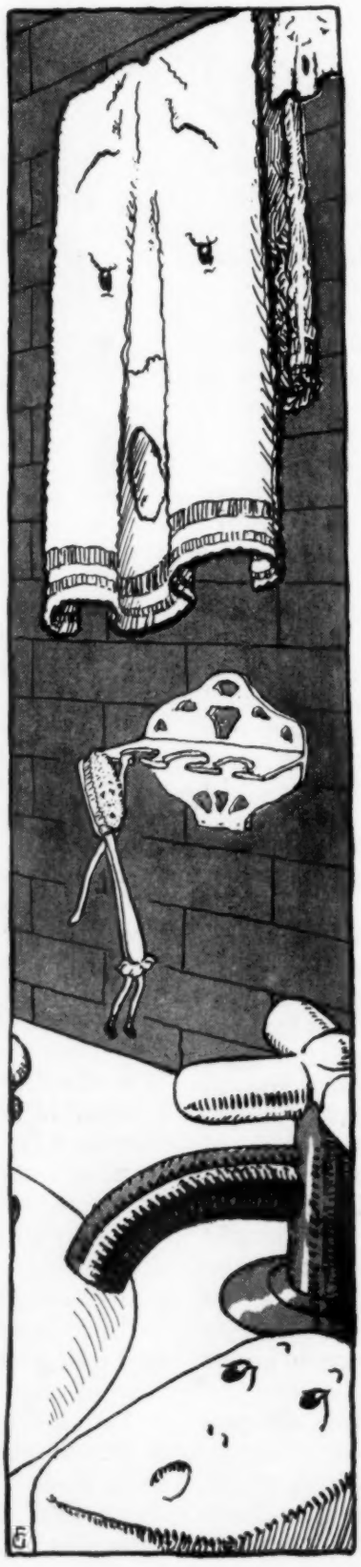
"Ho! Ho!" cried the Big Bath Towel.

"Ha! Ha!" laughed the Pink Wash-Cloth.

"He! He!" snickered the Soap.

"I cannot stand it any longer!" cried the Little White Tooth-Brush, wiping her eyes on the Guest Towel. "I shall go straight downstairs and help Cook clean the silver. That is all I am good for!"

The Little White Tooth-Brush moved nearer the edge of the rack. She let go with one hand. She leaned over.



"Stop!" gasped the Big Bath Towel.

"Wait!" begged the Pink Wash-Cloth.

"E-e-e-e-h-h!" squealed the Soap, wringing his slippery hands.

"Good-by!" cried the Little White Tooth-Brush, and she let go with the other hand. Then, while the others hid their eyes, she swayed outward and fell down . . . down . . . down . . .!

Now, of course, the Little White Tooth-Brush did not go downstairs to help Cook clean the silver. Nor did she fall far, because the smooth, white shelf of the wash-basin was right below her. And that is where Peter spied her when he took his bath that night.

"Oh, Mother!" he cried, "There's my tooth-brush! How do you s'pose it got there?"

"Perhaps you forgot to put it back at noon," Mother replied. She looked at the Little White Tooth-Brush. The tiny bristles were quite dry. "Perhaps you forgot to use it the last time," Mother went on. "Did you, dear?"

"I guess I did forget," said Peter, smiling sheepishly. "But, Mummy, it's hard to remember!"

"Let's give the Little White Tooth-Brush a tiny necktie to help you remember," said Mother.

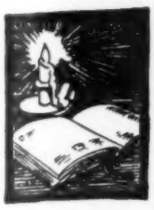
So, when Peter had brushed his teeth, what do you suppose Mother did? She tied a tiny red ribbon about the Little White Tooth-Brush—a wee, bright red ribbon with a lovely little bow! Then she hung the Little White Tooth-Brush snugly back in the brush rack and, carrying little Peter off to bed, closed the door.

"Oh-h-h!" gasped the Big Bath Towel.

"Ah-h-h!" cried the Pink Wash-Cloth.

"Um-m-m-m!" said the Soap.

But the Little White Tooth-Brush only smiled . . . and smiled . . . and smiled!



NEW BOOKS ON HEALTH

PREPARATION FOR MARRIAGE

Edited by Kenneth M. Walker. Price, $2. Pp. 159. New York City: W. W. Norton & Co., Inc., 1933.

THIS VOLUME is a symposium to which numerous competent persons have contributed various chapters, without any identification, however, as to which contributor wrote which chapter. The book has an introduction by Logan Clendening, who vouches for the soundness of the facts contained and approves particularly the candor of the advice. The book is actually dependable and does provide in a straightforward manner modern points of view relative to preparation for marriage, courtship, the physiology of sexual relationships, and similar topics. There are also discussions of adjustments in marriage relationships, of parenthood, fertility and sterility, birth control and even sexual aberrations. There is also a special chapter for those who presume to advise other persons in this field. The book is exceedingly practical and may be recommended to those who require this kind of book.

MORRIS FISHBEIN, M.D.

WHAT TO TELL THE PUBLIC ABOUT HEALTH

Price, $2. Pp. 255. New York City: American Public Health Association. 1933.

THE AMERICAN Public Health Association has authorized the publication of this collection of short articles aimed to present in simple terms the facts about the prevention of disease and the promotion of health. The compiler is Ira V. Hiscock. The book is divided into various sections concerning babies, cleanliness, diseases, fads and fallacies, food-milk-water, personal hygiene, public health, safety, and miscellaneous material. The articles are selected from numerous sources and particularly from the writings of executive secretaries of various welfare organizations. Most of the articles are developed in extraordinary typography, and illustrations are principally black and white drawings. A great deal of the material is without credit to authorship, except such as has already been mentioned.

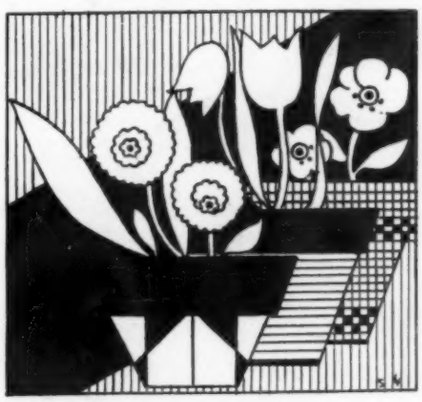
The chief value of this material would seem to be its accuracy and the simplicity of its presentation. There is little, if any, method of measuring its efficacy in getting important health knowledge across to the public.

The collections of material are supplemented in this booklet by an appendix giving the names of newer books about health education and containing a list of organizations that supply health education material. This list is comprehensive, including not only reliable organizations in the field of health but also manufacturers of foods, drugs and devices associated with hygiene. M. F.

CULTIVATING THE CHILD'S APPETITE

By C. A. Aldrich, M.D. Price, $1.25. Pp. 137. New York: The Macmillan Company, 1932.

ALMOST EVERY pediatrician is familiar with Dr. Aldrich's timely contribution to the subject of practical nutrition. It can be safely stated that hundreds of physicians have been spared some trying situations by prescribing this text to the mothers of many of their patients. The book has served an invaluable purpose in this connection, and it is doubtful whether a better piece of missionary work between the public and the physician has been produced in recent years.



The continuity of the text of the previous edition has been left in its original and comprehensive style, and only minor changes have been added to meet the recent developments of the subject. Any physician who has been charged with the care of children should have a copy of this book in his possession. H. G. PONCHER, M.D.

THE EMPLOYMENT OF WOMEN IN VITREOUS ENAMELING

By Ethel L. Best. Soft cover. Price, 10 cents. Pp. 64, with numerous tables and illustrations. Washington, D. C.: U. S. Government Printing Office, 1932.

THE ENAMELING of stoves is a new industry in this country, largely carried on by women workers who come into extensive contact with lead. Therefore the Women's Bureau made a study of cases, which is presented here with an introduction prepared by Alice Hamilton.

In none of the plants was there adequate medical service, and in only a small minority was there adequate provision for cleanliness. In comparatively few states is there adequate protection for women who apply lead to stoves. Here is a new industry, newly grown, with tremendous hazards to health and life. Dr. Hamilton feels that the one correct step is to substitute leadless enamel for lead enamel. Whether or not such a recommendation is likely to be accepted, the indications are clear that the hazard exists, and some definite precautions must be taken to guard these workers. M. F.

THEORY OF FENCING

By J. Martinez Castelló. Cloth. Price, $2. Pp. 150, with numerous illustrations. Boston: Bruce Humphries, Inc., 1931.

FENCING has a long history as a sport; however, in this country it has always been a minor rather than a major sport. The author of the book is an authority in the field. He was formerly coach of the United States Olympic Fencing Team.

His book affords an excellent outline of the subject. Particularly interesting is the author's final recommendation: "To this end, good form and good manners should always be observed on the fencing strip, and the beginner should refrain from the heat of combat until he has learned discipline and self-control by many long hours of conscientious practice limited to exercises." M. F.

SCHOOL AND HEALTH

A Department Conducted by J. MACE ANDRESS, Ph.D.

67 Clyde Street, Newtonville, Mass.

Child Health Day

"MOTHERS AND BABIES FIRST" IS MAY DAY SLOGAN THIS YEAR

"MOTHERS and Babies First" is the slogan chosen for May Day—Child Health Day this year. It is a reminder that for the sake of the future of the race, babies must be allowed the care necessary for their development, and expectant and nursing mothers must be properly nourished and cared for if the children are to thrive.

Local committees for Child Health Day are taking advantage of the opportunities for public health education that the day affords, to press the warning on the attention of the public. Many laymen do not understand, as physicians and welfare workers do, that privation in childhood cannot always be made up for later; rather, it is liable to show itself in later years in impaired physical stamina, in greater susceptibility to disease and, probably, in nervous instability.

Five or six years from now the pupils entering the public schools for the first time will be the children who are the babies of today. For this reason, if for no other, teachers have an interest in the health of the mothers and babies of the country. To have in the class, children who tire easily, who are frequently absent on account of sickness or who are in greater or less degree problem children would be a severe addition to the burden of the teacher.

In five or six years the pupils entering the public schools for the first time will be the children who are the babies of today. Every teacher, for this reason, should have a definite interest in the babies and mothers of this country.

Ewing Galloway

It is already well recognized that the schools are benefited by the movement for the correction of physical and mental defects in children previous to their first entrance into school. One state chairman for May Day—Child Health Day in 1932 reports: "There continues to be mounting interest in preventive and protective work among preschool children. The returns this year from every part of the state indicate that in spite of the present grave difficulties in giving children what they need for health, more was done to make possible the giving of physical examinations to young children than in any previous year." In another state the head of the department of public instruction, in more than 800 letters sent out to school principals and superintendents, set the seal of the department's approval on health work with young children in preparation for school entrance, thus opening up many a new avenue for the giving of school help.

If the teacher has a direct interest in the health of the child about to enter school, she has an interest, only slightly removed, in the health of the still younger child. In other words, health as a community problem is to be taken seriously by the teacher as well as by the public health worker. The teacher may not be in a position to influence the health of any individual mother or infant, but she can be an influential supporter of the official program of public health, which always includes some provision for maternal and infant care. The tie between education and public health was evidenced last year when a county in one of the western states organized a council of health officers, public health nurses and school superintendents for the purpose of keeping in closer touch with the department of health and of working out relationships between the private physicians and all public health activities. This was initiated as a Child Health Day project, but the council was a permanent one.

May Day—Child Health Day is of most value to the school when it stimulates activities having, as this one had, a permanent value. Though teachers will undoubtedly find ways

of making the slogan of the year effective, their plans for May Day will in most cases cover other fields.

An activity of last year in an eastern state illustrates a fine example of cooperation between the forces of health and of education. A need was felt for improved health work in the high schools. This was taken as a May Day project, and a great deal of time and thought were given to the problem by both the state department of health and the state department of education. A plan was worked out for the creation in the school of a school health council, comprising a faculty council and a student council, and the inclusion in the curriculum of a course in health education.

Two schools, widely separated geographically, were chosen for the experiment. In one, the faculty council was made up of the principal, the submaster, the assistant to the principal, the dean of girls, the physical education supervisor, the girls' physical education instructor and the health supervisor. Two students were chosen from each of the classes to form the student council.

Some of the activities of the council were as follows: ventilation of the lunchroom, improved general appearance of the lunchroom, periodic check-up on lighting and ventilation, proper adjustment of seats to students in various classrooms, orderly keeping of lockerrooms, inspection of toilet-rooms, and a survey of the building by the junior and sophomore members of the council. These activities were carried on during free periods.

The course in health education was given in one school to freshmen and in the other to sophomores. It included instruction in nutrition, growth, physical education, personal health and public health. The home economics teacher, the physical education teacher, the school nurse, the science teacher and the school doctor planned the course, so that it had continuity of interest, and each took the class for a group of recitations covering his particular subject.

A number of other instances of worthwhile May Day activities that led into activities of permanent value are briefly set out in the 1933 May Day pamphlet published by the American Child Health Association.

For the past two years the guiding thought has been the close tie between the school, the community and the child in the home. This year the slogan, "Mothers and Babies First," seems to sound a different note, but the difference is more apparent than real. The schools cannot but be affected within a short time by the degree and quality of care given to infants. Only part of that care can be given privately. The responsibility for the purity of the water and milk supplies, the control of contagious diseases, and the provision of prenatal and postnatal care to mothers who do not have a private physician are all in the hands of the public health authorities.

So once more it becomes apparent that in the school, the home and society, there is a community of interest that cannot be divided without loss to each.

Underwood & Underwood

Preparation for a health day program for mothers in observation of Child Health Week proved to be a fascinating and stimulating enterprise.

TEACHING HEALTH

(In this column will be published each month concrete examples of good health teaching. Teachers are invited to send in contributions not exceeding 600 words and preferably less to the editor of this department. Illustrations of the actual work of children will be welcomed. Contributions accepted will be paid for but no manuscripts will be returned.)

A HEALTH DAY PROGRAM IN A ONE-TEACHER SCHOOL

THE FIRST WEEK in May is to be celebrated throughout the nation as Child Health Week. I wanted to secure the interest of my pupils in a special Health Day program. In a daily newspaper I found an article concerning this particular week, and I read it to the children. There was no difficulty in arousing their enthusiasm, and they were ready to give many suggestions for carrying out the program effectively. Jimmie asked whether they might not have a radio program, using material from their hygiene lessons for broadcasting. Mary Jane thought the class ought to invite the mothers. Another child wanted the children of preschool age to attend. They seemed eager to show their abilities and interests to mother and to little brother or sister.

Having decided on a community celebration and the form in which it was to be carried out, they began to get the material ready. Here was a chance for a great deal of correlation with other subjects in the curriculum. In composition work, invitations were written and the best ones were sent out. For the next week, the smallest to the largest were busily at work making preparations for the coming event. They searched for songs, poems, dialogs and plays. Each child chose his own material except for the smaller ones, whom the older children helped. Every spare moment was used for preparation. During school hours the school library was used for practicing.

May 2, the eventful day, came at last. When the mothers arrived I gave them the following questionnaire, instructing them to answer the questions if they so desired. Their answers were unique and revealing. The questions are shown in italics; a few of the answers given are listed under each question:

What have you learned this year from magazines, papers and other sources that has been helpful in the upbringing of your child?

1. I have read in the newspaper the various articles which Dr. Angelo Patri has written. His advice has been very helpful.

More than 1,000 children were protected against diphtheria in a small city which had never attempted a widespread toxin-antitoxin campaign.

2. I have read from the fashions about loose clothes, easy shoes, low heels, and from the food department about milk and fruit in the diet, and that foods which make for chewing a lot are the best.

3. I learned so much through the Home Bureau about child care and feeding when my children were small that I have tried to practice that.

What have you done this school year to better your child's health?

1. Dressed them warmly enough. Kept them as clean as I could. Kept them to regular hours. Made them work as well as play. Will take them to the dentist when school is out, and I am feeding them nourishing food.

2. I am sure my child has gained weight faster since I gave him fruit and milk for lunch, in addition to a glass of milk with every meal at home.

Do you endeavor to stimulate good health habits in your child? If so, how?

1. By having them wash their hands before eating. Have them take a bath once a week and wash the face, neck, ears and hands every morning.

2. By insisting on his following all the health rules he is taught at school.

What is your attitude toward the school doctor and nurse?

1. I think they help us keep our children in good health and their teeth in good condition.

2. Yes, I think the doctor and nurse do good work in the schools. While we all have our own doctors, we still like to have others' opinions, too, about the children's health.

3. I feel that it is a good thing. It brings to our attention little things about them that otherwise might be overlooked.

Do you believe that health teaching in the school has been a success toward the betterment of your child's health?

1. Yes, the health teaching in school has done more toward making my children realize the importance of the health rules than all the talking I have done so far.

2. It helps me because it is not necessary for me to watch them so closely mornings to see that they have observed the rules.

These answers brought me in closer contact with the mothers and helped me understand better what they are trying to do at home. It was interesting to learn the sources from which the parents were educating themselves on child health and child behavior and to see to what extent they were using the so-called advertising type of health knowledge.

After the mothers had finished answering the questions, the children started their program. One of the boys in the seventh grade made a play radio from a large carton. A screen was brought from one of the homes to hide the "broadcasters" from view of the audience. The name of the station was H-E-A-L-T-H. Over this station was broadcast the program the children had prepared. The sixth and seventh grades staged a short play called "The Kingdom of Health" before the radio program began. The mothers were delighted with the children's broadcasting.

After the program the girls of the upper grades served cookies and tea to the mothers and sandwiches and milk to the pupils. The money used for the refreshments was furnished by the English Club organized in the school. The girls prepared the food and cleared away the tea things. They were greatly excited about the new idea. A feeling of duty and responsibility prevailed, and all were ready to cooperate. The girls thought it was one of the most delightful afternoons they had ever spent at school.

The children, the parents and I felt that the program had been a real success.

MARY WESCOTT,
South Dayton, N. Y.

HEALTH FOR A NICKEL

A NICKEL SHOW given by children furnished both inspiration and funds for a growing School Charities Association which has put good health within the reach of every school child in Marshfield, a city in central Wisconsin with a population of 9,000. Furthermore, it has brought about a citywide toxin-antitoxin program that has protected 2,042 children. In reality the schools of Marshfield are conducting a nine month application of Child Health Day.

Of course the nickel show was not a common "kid show," nor was the project which it initiated an ordinary one. But the price was 5 cents, and the nickels have helped tremendously in protecting the health of the boy or girl whose family is hard pressed for a bare existence. The show was a stage performance directed by school teachers; it proved such a success that monthly shows have been held for the last four school years.

The fund has provided needed medical attention, dental care, haircuts, some school books, gymnasium clothing, and toxin-antitoxin for 897 public school children, and it was directly responsible for a second program, using city funds, which protected 1,145 additional children against diphtheria.

The entertainments, known as "charity health programs," last only an hour and feature one-act plays, musical numbers, gymnastics, games, glee clubs, folk dancing or tableaux. Often a "guest artist," some talented parent or teacher, offers musical selections or humorous readings. In nearly every instance the program consists of activities which are a regular part of the school work, so that little additional time is spent in rehearsals. Christmas programs are charity events, with no admission charged, although a "good will" collection is substituted.

Occasionally the School Charities Association also sponsors professional entertainments of a high caliber, such as the Russian Cossack Chorus and the Liege String Quartet. Annually the faculty gives a play and donates the proceeds to the fund.

The superintendent of schools stands behind the School Charities Association, considering it one of

the most beneficial community enterprises which a group of instructors may assume.

To carry out the objective of safeguarding the health of children whose parents are unable to provide proper medical and dental work, a committee of teachers is elected. When committee members note that Bobby has a decayed tooth, Willie needs a haircut, Mary needs a pair of glasses or Johnny breaks an arm, they report to the school nurse. Usually she makes a home visit, and if the family is unable to meet the bill, it is paid by the School Charities Association.

School books, "gym" suits and some articles of clothing have been furnished, and such equipment is kept and passed on to other children. The association's work has been a godsend during the years of depression. Local business men have cooperated by furnishing items and services at cost.

Necessity for a disease prevention program was foreseen by the association, and toward that end it saved its funds for the administration of toxin-antitoxin for the prevention of diphtheria. The serum was given free to all public school children who desired the protection.

The school nurse, chairman of the committee in 1930-1932, was placed in charge. She obtained the cooperation of a clinic of fifteen physicians, several of whom volunteered their professional services at a minimum cost. Her second step was to educate the public to the need for protection through articles published in the city's daily paper, explaining every detail of toxin-antitoxin, immunity and the Schick test.

No widespread toxin-antitoxin campaign had ever been attempted in Marshfield, and most children were susceptible to the disease. Of 1,333 in the public schools, 125 had been inoculated, 25 had had the disease, and 96 had gained natural immunity, Schick tests showed. At the close of the campaign, only 190 public school children remained unprotected.

A total of 867 children were given the three inoculations at the school clinics, and 30 others were taken directly to physicians by their parents.

Efficiency at the clinics is demonstrated by the fact that one doctor inoculated 422 children during one hour and twenty minutes, with four nurses sterilizing and filling Luer syringes (1 cc.).

A few registered and graduate nurses were hired to assist the doctors, and a school of nursing also furnished several student nurses. Other women, a number of them members of the nurse's night school class in home hygiene, left their housework to go to the clinics and assist in the less technical duties.

The nurse's report showed a total cost of $443.04, all paid out of the charity association funds. This amount included money paid to doctors and nurses for their services, purchase of controls, Schick tests, serum, needles, iodine, alcohol, cotton and all other necessities.

Interest had been aroused. At the opening of school in the autumn of 1932, the newly appointed health officer asked for a city appropriation to immunize 1,300 unprotected children, most of them in the city's two parochial schools. He explained that the funds of the School Charities Association were exhausted and that there was no way to finance the work without an appropriation. He said the work would cost 55 cents a child. The city council approved the appropriation.

Schick tests for all who had been inoculated the year before were paid by donations of 15 cents each, given by the children. It was found that 95 per cent of the children were immunized by the first three inoculations, with only 30 out of 616 showing positive Schick tests.

With the city now solidly behind the movement, 429 more public school children and 716 others received the protection. Every one cooperated, as before, and the clinics were completed with business-like dispatch. The city health officer did the greater part of the actual inoculating, and the nurse made preliminary arrangements and secured parents' signatures on permission cards.

Successful in raising funds, judicious in spending them, the School Charities Association has proved its worth as a community enterprise and has demonstrated beyond doubt how far nickels and dimes can go in public health work. The experience of Marshfield typifies what may be done in other medium sized and small cities.

J. Parr Godfrey,
Marshfield, Wis.

CORRECTING REMEDIABLE PHYSICAL DEFECTS IN JUNIOR HIGH SCHOOL

About three years ago, the board of education of the City of New York changed the name of the subject "Physical Training" to "Health Education." By this change the old overburdening stress of the physical activities was removed, and the larger significance of teaching health was recognized.

This was in accord with another signal contribution, the School Health Day. This is a day set aside for a general physical examination

Warren Boyer

by the teacher. A special form lists the five chief kinds of remediable physical defects; namely, vision, teeth, hearing, nasal breathing and nutrition. One copy goes to the school nurse and another is retained by the teacher. This record is copied on the "Physical Examination Card," a permanent record, passed on together with the official scholastic record from term to term.

The teacher prepares the groundwork for the physician. In cardiac cases the teacher relies entirely on the physician's observations. By using the Snellen eye chart, by giving a careful examination of the mouth, by checking weight, height and age, and by using the whisper test, the instructor determines the presence of the major defects.

To the principal is entrusted the responsibility of directing the health program.

The following results in the correction of physical defects were obtained in Junior High School 97 Manhattan:

FIRST HEALTH DAY

Oct.	10, 1930	631 defects discovered
Nov.	6, 1930	157 (25%) corrected
Dec.	19, 1930	332 (53%) corrected
Jan.	23, 1931	440 (65%) corrected

SECOND HEALTH DAY

Feb.	6, 1931	520 defects discovered
March	20, 1931	173 (33%) corrected
May	1, 1931	273 (53%) corrected
June	12, 1931	363 (67%) corrected

THIRD HEALTH DAY

Sept.	25, 1931	556 defects discovered
Oct.	30, 1931	141 (25%) corrected
Dec.	11, 1931	241 (42%) corrected
Jan.	29, 1932	388 (68%) corrected

FOURTH HEALTH DAY

Feb.	9, 1932	424 defects discovered
March	19, 1932	105 (25%) corrected
May	6, 1932	180 (45%) corrected
June	17, 1932	315 (74%) corrected

FIFTH HEALTH DAY

Sept.	16, 1932	335 defects discovered
Oct.	21, 1932	98 (29%) corrected
Dec.	2, 1932	212 (63%) corrected
Jan.	20, 1933	278 (83%) corrected

The widespread prevalence of physical defects in children has been generally noted to be from one third to one half of the total school register. The largest number are found in the seventh year, in pupils entering the junior high school. The dependence of good health on good teeth, vision, hearing, respiration and nutrition has not become obvious. To remove defects such as these, is therefore fundamental health education and the best health insurance for the adolescent.

The classroom teacher is responsible for bringing about correction; she is assisted by the health counselors, of whom there are three in the school; there is one each for the seventh, eighth and ninth years, respectively. One hour daily is allotted to the health counselor for his check-up. His duty is to visit the classroom, take out the pupils with defects and question them in an unoccupied neighboring room. The visit is frank and friendly; the questions are individual, personal and sympathetic. The teacher is informed of the outcome, and the entire interview takes only a few minutes.

Signed statements by a physician are required. The dental certificates supplied by the board of education stimulate correction. This device might well be extended to other types of defects.

The results are tabulated three times each term to correspond with the preliminary, mid-term and final marking periods. A correlation is made with the "personal habits mark" on the report card, so that health education assumes the status of a regular subject.

When the forgetful or the lazy pupil finds "C" or "D" as the personal habits mark, afterward he is not so neglectful. The underprivileged are assisted by the school relief fund, made available chiefly through the Bertha Fribourg Memorial Fund. The entire school is made aware of the results through the medium of the school assembly, by personal messages from the principal in the bi-weekly newspaper, and by the posting of the graphic records in the school health room. Health education thus becomes a vital socializing force.

This work has shown the need for the unification, centralization and standardization of the clinical and medical services for school children. The simplest plan seems to be to arrange for this service by using the school district as a unit, centrally located and with uniform rules and procedures. Many instances of duplication and inarticulation would thus be avoided. Such a service would provide the best single incentive for the realization of the correctional and, therefore, the preventive side of the health education program.

SAMUEL B. PRENN,
New York City.

NEW HEALTH BOOKS AND TEACHERS' MATERIALS

THE TEACHERS of health are greatly indebted to Dr. James Frederick Rodgers for his excellent reports. His latest report, "High Spots in School Life," [1] offers the reader a clear insight into the most suggestive activities in the health field. Nutrition, growth, posture, dental hygiene and other health problems are considered briefly and well. There is an excellent bibliography of twenty-seven titles. In two closely packed pages, Dr. Rodgers indicates the high spots in health education during the past year.

EACH NUMBER of the "Health Bulletin for Teachers" is valuable. "Disinfection and Disinfectants" [2] in particular is helpful in giving the teacher a good idea of the differences in meaning of such words as sterilization, disinfection, antisepsis and deodorization. There is some practical information about disinfection and disinfectants. For example, on the last page is this important statement: "True chemical disinfectants have no place in ordinary household use. For everyday usage, thorough cleansing with soap and water is sufficient."

THERE is an old song reminiscent of the editor's youth about the delights of "a bicycle built for two." This is frowned on in the first page of the safety calendar published through the cooperation of the school children of Louisville, Ky. It is a reminder perhaps that in a country which boasts 25 million or more automobiles "Two on a bike is one too many." Each page has striking illustrations and suggestions for safety. Congratulations to the supervisors, teachers and boys and girls who made possible "Making Safety a World Wide Project." [3]

EVERY TEACHER of health is interested in encouraging children to drink milk, the most nearly perfect food known to man. Fortunately there is a vast amount of material published on this subject, which the teacher may get free of charge or at a nominal price.

The Dairyman's League has available posters and other teaching materials. Much of this material tells the story of milk in far-away lands. The teacher who is in possession of such a collection could put on the walls of her schoolroom a fresh poster every few days. A complete set of these posters might be owned by a school and passed around to the teachers of the various grades, each room having its turn.

The material includes stories, plays, units on milk, suggestions for teachers, and teaching materials that have been carefully prepared. Teachers who are interested should write for the pamphlet "Health Education Materials" [4] and for other literature, which will be gladly sent.

1. By Rodgers, J. F., M.D. A biennial review, 1930-1932. Reprint from *School Life*, vol. 18, no. 2 (Dec.) 1932. Washington, D. C.: Office of Education, U. S. Department of the Interior.

2. Health Bulletin for Teachers. Pp. 4. New York: Metropolitan Life Insurance Company, 1933.

3. Louisville, Ky.: Louisville Public Schools, 1933.

4. Pp. 31. New York: Dairymen's League Cooperative Association, Inc.

QUESTIONS AND ANSWERS

Acidosis

To the Editor:—I understand that acidophilus blocks are the only successful treatment or cure for acidosis. What information can you give me about it? Would it be safe for a 5 year old child?

J. T. S., Pennsylvania.

Answer.—The use of acidophilus bacillus is not advised either in blocks or in any other form, unless a physician has ordered it. Acidosis is a symptom, not a disease. Consequently it may be due to a number of causes. It should be treated by removal of the cause, not merely by the giving of a palliative. This means that the child should have a complete examination, after which the doctor will be in a position to advise what to do.

Neurasthenia

To the Editor:—Has any medical treatment for chronic neurasthenia other than the full rest cure, correction of refractive errors and relief from mental strain been discovered? Is the opinion of some endocrinologists that suprarenal deficiency is the basic cause now generally received? If so, could the administration of ephedrine along with suprarenal extract be considered effective therapy? How long does the neurasthenic state sometimes preceding insanity generally last before clear-cut symptoms of derangement appear? Has the statement that impacted wisdom teeth are frequently a precipitating factor in lunacy the support of good alienists?

R. C. A., Colorado.

Answer.—The term neurasthenia is used with many varied meanings. Most often it seems to be applied to a set of symptoms consisting of feelings of general weakness, fatigue and hypersensitiveness, often with special discomforts in particular organs or systems of organs. As thus used, it is comparable with the term headache. It describes a complex of symptoms and is not a diagnosis. Such a complex is frequent in association with many diseases, particularly those of chronic exhausting character, such as tuberculosis, carcinoma, pernicious anemia and diabetes, the presence of which can, of course, be recognized by proper examination of the patient. In some instances it is believed by many that there is some endocrine dysfunction, most often of obscure nature. In certain selected cases of this type the suprarenal glands have been degenerated and improvement has been reported in some patients; in other cases endocrine preparations have been administered with varying success, but it is still a question whether these remedies are in any sense specific. On the other hand, in many cases, probably the great majority, the cause of the exhaustion lies in the emotional life of the patient. Conditions he is called on to face, usually of a deeply personal nature, are so burdensome that he accepts the fatigue resulting from his worry as evidence of illness, thus escaping personal responsibility for dealing with his difficulties.

Under these circumstances it is impossible to lay down any general rules for therapy. The first requisite is diagnosis; then the selection of procedures appropriate to the causes must follow. Rest and forced feeding are symptomatic measures and are often useful either alone or in combination with more specific measures. Visual difficulties caused by errors in refraction probably never cause such a strain of symptoms; they may be associated with other true causes and then be used as a convenient excuse to cover up the real trouble. If by mental strain is meant emotional strain, this is unquestionably a potent factor in causing neurasthenic symptoms. This, however, is not the same as overwork which, while it may cause temporary fatigue, is not a cause for "chronic neurasthenia." To remedy emotional strain it is first necessary to discover the factors in the life of the patient which are causing the strain and to deal with them rationally, by educating the patient, by modifying his surroundings or by combining such measures. Such procedures as rest, feeding, recreation and massage may, of course, be useful in combination with the more rational methods.

A neurasthenic state is sometimes an early manifestation of illnesses, organic in nature and recognizable through proper methods of examination, which cause mental illness, just as it is observed in the chronic illnesses already mentioned. Evidences of the existence of disease of this kind, however, are present as early as the neurasthenic state itself, and there is no need to wait for the appearance of mental derangement before making a diagnosis. In the absence of signs of such an illness, the neurasthenic state does not lead to mental illness of the kind that necessitates commitment, the true meaning of the word insanity. The words lunacy and insanity are strictly legal terms and are used by physicians with the legal meaning only; they imply that the behavior of the patient as a result of illness is such that, for the protection of himself and others, he is deemed unable to manage his affairs.

It is not a fact "that impacted wisdom teeth are frequently a precipitating factor" in mental illness.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Life Duration of Germs Outside the Human Body

To the Editor:—How long can such germs as tetanus, the coccus family and other germs dangerous to man survive on clothing or wood away from animal life?

K. T. F., California.

Answer.—The tetanus organism, being one of those which forms spores under unfavorable conditions, is exceedingly resistant to an unfriendly environment and may persist for years in the ground as well as on objects which may have lain on the ground and become soiled. Many of the germs of communicable disease do not have a long life outside the human body, with the possible exception of those of some water-borne diseases like typhoid, of which the organisms may live in water for considerable periods of time and may even be stored in ice and survive until the ice is melted; they may possibly infect persons who use the ice in beverages.

Drugs, Treatment for Bronchial Infection

To the Editor:—Are ammonium chloride tablets harmful in cases of colds and bronchial troubles?

G. P., Illinois.

Answer.—Ammonium chloride tablets, properly used under the supervision of one who understands drugs, namely, a physician, are useful in certain kinds of bronchial infections at certain stages of the disease. At other stages and in other infections their use may be undesirable. Used by the layman without knowledge of whether or not he ought to have ammonium chloride, they are almost sure to be useless and probably harmful. The proper use of any drug is of great importance. This applies to every drug, not only to ammonium chloride.

Deafness

To the Editor:—About four or five months ago I awoke in the middle of the night to find that the pressure of my head against the pillow had caused my left ear to feel closed up. When I raised my head I thought I felt something, and immediately my right ear began to ring. It has been ringing without interruption ever since. At first I dismissed this from my mind, as I have had occasional ringing in my ears before. When I saw that it persisted, I consulted a physician who said that nothing was wrong. Later, I visited a doctor whose specialty is along this line. He told me the eustachian tube had collapsed, and he has been giving me treatments for it, saying that he will not test my hearing in that ear until the tube has been built up. Through tests of my own, I have found that I barely hear out of my left ear and cannot understand words whispered into it. However, I use that ear in talking through the telephone, although messages do not seem as sharp as before. In the meantime, my right ear feels stopped at times, is quite sensitive and there is sometimes a pain. Otherwise, I seem to hear well out of it. Now that I am finishing school, after five years of hard work and am ready to begin teaching next fall, I feel discouraged, as I realize that my entire future and happiness depend on my hearing and general health.

A. N., Indiana.

Answer.—We would judge it probable that the inquirer has had an inflammation of the eustachian tube, with a partial closure of the tube in both ears, a common factor in impairment of hearing. Normally, this tube, leading from the back of the nostrils into the middle ear, affords a free avenue for the entrance and exit of air to the middle ear.

As to the best treatment in any case, that must be determined by the physician in charge.

Heart Disease

To the Editor:—My mother has heart trouble, and when I took her to a physician a number of years ago, he said it would not be necessary for him to prescribe medicine for her at the time. Later, when I went to him to talk about mother's condition and explained that she seemed to be feeling less comfortable than at the time of the examination, he got out his record of the examination, and then said he had better give her some digitalis, which she now takes every two or three weeks for one week at a time. Recently, circumstances made it necessary to change doctors, and the second doctor regretted that digitalis had been prescribed. He said that when this drug has once been taken, it is impossible to discontinue it and that it keeps the patient going to a certain point, but at the same time it wears the heart out and probably causes death sooner than would otherwise occur. Since other members of my family also have heart trouble, I should like to be told the truth about the matter by some one who knows.

J. G., Kentucky.

Answer.—The mechanical efficiency of the heart, on which the body depends for a proper circulation of the blood, may be interfered with in several ways. One or more of the valves may fail to close effectively, and the resulting leak will make necessary additional work on the part of the heart muscle to maintain the required flow of blood, just as in case of a pump, which requires more power to maintain its normal output when one of its valves fails to close properly. This added work is at first easily accomplished by the reserve power present in all normal hearts, but as the load increases, the reserve power becomes relatively less, until some physical exertion so overtaxes the heart that symptoms of heart weakness, such as shortness of breath or swelling of the ankles, appear.

Increase of resistance to the flow of blood through the smaller arteries and capillaries, which accompanies some forms of kidney disease and is sometimes found independently of kidney disease, results in increased work by the heart to maintain circulation. As the resistance to blood flow increases, the work required of the heart muscle increases, until finally the heart muscle is unable to meet the strain, and symptoms of failing heart appear just as in valvular disease. In both of these general groups of causes of disturbed heart action and in certain others as well, the problem concerns the maintenance of the effectiveness of the heart muscle.

Digitalis given in suitable doses slows the heart beat, makes it more regular and increases the power of its muscular contraction. Digitalis and similarly acting drugs are therefore widely used and are the most valuable remedies in the treatment of many forms of heart disease.

From these briefly stated general facts concerning the action of the heart and the effects of digitalis in making the contraction of the heart muscle more efficient, one may interpret the changing conditions in the patient under discussion. When she first consulted her physician he no doubt found evidence of heart impairment but of a degree that could well be met by care as to overexertion without the aid of digitalis. With advancing years, even minor changes in heart muscle tend to progress, no matter whether the original difficulty is valvular or is due to overload on the heart muscle from hypertension or to nutritional changes in the heart which come with age. After some years, the physician found that now the patient's heart required some additional help to keep it functioning properly, and quite properly he gave digitalis.

The necessity for continuation of digitalis depends on the condition of the heart for which it is given. If the heart weakness arises from temporary overstrain, digitalis may enable the heart to regain adequate power and rhythm, and when this is accomplished digitalis may be stopped. If, on the other hand, the heart muscle unaided is unable to compensate for the added load imposed on it by valvular leak or increased resistance to blood flow, the help from digitalis will have to be continued. The unfavorable outcome in some cases is caused by the condition for which digitalis is given and not by the use of digitalis. There are certain kinds of disturbance of heart action in which digitalis should be withheld, but these are relatively rare.

Digitalis is a valuable remedy but should be given under the supervision of a physician who will be able to regulate the dosage and to determine whether the patient should be seen frequently or only at long intervals.

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• THE EPISCOPAL EYE, EAR AND THROAT HOSPITAL in Washington, offering the highest type of modern, specialized service, regularly uses Hexylresorcinol Solution S. T. 37 (1:1000) in the treatment of nose and throat cases.

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Buy a bottle today. At all drug stores in the United States at the new price reductions. Slightly higher in Canada.

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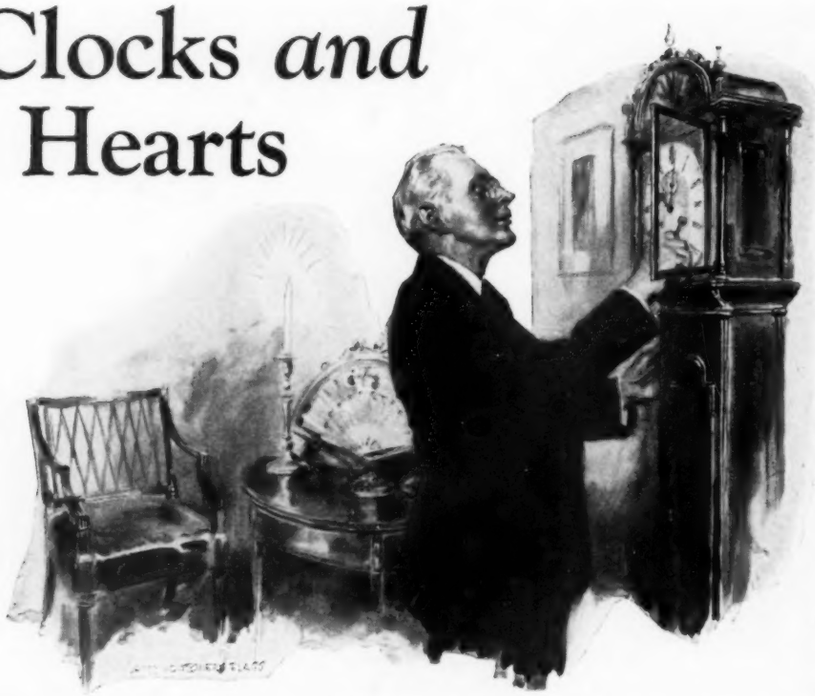
Clocks *and* Hearts



WHEN you look at a beautiful clock which has kept almost perfect time for nearly a hundred years, you marvel at the skill of its maker.

However, it could not have kept ticking 31,536,000 times a year if it had not been regularly inspected and kept in good repair during its long life.

But far more remarkable than the old clock is the engine made for you by Nature, which pumps faster than the clock ticks—your own heart which has throbbed more than 35,000,000 times a year with no stopping for repairs. Your very life depends upon its continuing ability to pump blood to all parts of your body.

Do you take good care of your heart? It will serve you longer, make you happier, make your life more worth living if you do not abuse it and if you do not neglect it in case it beats too fast or too slow, too faintly or too violently.

A man with a bad heart—*who has learned how to take care of it*—frequently outlives men who persistently abuse their hearts. Some of the most efficient and useful people in the world have had heart trouble for years.

In sharp contrast to people who have real heart ailments are the many persons who worry about imaginary heart trouble. Indigestion, lung trouble or nervousness may cause symptoms near the heart, while the heart itself is entirely sound.

If you would keep your heart beating contentedly, like Grandfather's clock—seventy, eighty or perhaps a hundred years—give it attention—at least an annual examination by a competent doctor. He will tell you what to do if it needs help or special care. The Metropolitan will be glad to send you its free booklet, "Give Your Heart a Chance." Address Booklet Department 533-Z.

Too prolonged overstrain at any age in life may cause heart trouble. There are, however, three general groups of heart difficulties:

FIRST—*the heart troubles of young people caused by diseases of childhood. Rheumatic fever and rheumatism (associated with "growing pains," tonsillitis and stiff and painful joints) frequently cause heart disease. Diphtheria, scarlet fever and measles may injure children's hearts.*

SECOND—*heart diseases of middle-aged people resulting from syphilis, toxic poisoning, or focal infection in teeth, tonsils, sinuses and elsewhere.*

THIRD—*heart ailments of old people which may result from one of these definite causes or from hardening of the arteries.*

Many people whose hearts have been damaged are adding years to their lives by hygienic living, rest and intelligently balanced exercise.

METROPOLITAN LIFE INSURANCE COMPANY

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Jaundice

To the Editor:—Is there an epidemic form of jaundice? Does diet or lack of certain foods cause it? My little girl had it in April, and I had an attack of it in May. I thought I had entirely recovered from it, but this month it has started again.

W. W. C., Ohio.

Answer.—An article on the gallbladder was published in HYGEIA (**6**: 604 [Nov.], 700 [Dec.] 1928). This will be helpful in understanding jaundice.

Jaundice is due to the absorption into the blood of the products of bile secretion. This is usually caused by interference with the proper discharge of the bile into the intestines. Jaundice is divided into two principal types, obstructive and inflammatory. This is not a good division, because the two kinds are obstructive, though in a different way.

Both the liver and the gallbladder discharge bile into the intestines through a small tube or duct, a part of which likewise serves for the discharge of digestive juice from the pancreas. Obstruction of the duct may come from an object in it, such as a stone, a plug of mucus or, on rare occasions, a worm entering the duct from the intestine. Conditions outside the duct may cause obstruction, as, for example, tumors making pressure on it, or sagging of the organs, which causes it to become twisted or bent. The inflammatory type of jaundice blocks or obstructs the duct by swelling of the membrane which lines it, as a result of inflammatory changes.

Jaundice is first evident usually in the whites of the eyes and then in the skin. It also appears in the urine; it is detected early in the blood.

There is an epidemic type of jaundice commonly known as Weil's disease, which is transmitted in some way through rats, though in what manner is not quite clear. Rat bites were suspected, but this theory has been largely discredited. Various insects have been investigated as possible transmitters from rats to human beings, but none has been convicted. There exists the possibility of transmission through water or food contaminated by excreta of the rat.

Lack of certain foods does not cause jaundice, but an unwise diet may indirectly cause it by causing digestive upsets; and these in turn produce inflammatory changes in the upper intestine which may readily extend to the bile ducts.

The appearance of jaundice always calls for medical advice.

Go to it, Son—

. . . you're O. K.

AND with a whoop he's off—for this means that he goes on the team. His marks have been high. He's keen—alert. Now he proves his final qualification—he has the doctor's O. K.

Not all boys his age are as well off physically and mentally. Far more of them than most people think are fighting a lurking foe. Reliable reports say that approximately one-fourth of all children from 5 to 15 years old have tuberculosis of the childhood type. At these ages tuberculosis strikes fast and hard. It gives no outward hint of its presence. Only x-rays can detect it. But when they reveal it early, treatment can be prompt and effective.

Yearly Examinations

Take no chances. Have your children examined at least once a year. Be examined yourself. Annual health audits will give you the greatest assurance of keeping well. And remember that x-rays alone can detect many disorders in those earlier stages when they are most easily corrected.

So when your physician advises that radiographs be made, he is using one of the most important aids in arriving at an accurate diagnosis.

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If not at dealers, order direct giving exact bust measure next to skin. Booklet free on request.

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Cosmetics

To the Editor:—I wish to secure some informative material on cosmetics and their origin. I lived in Turkey when I was a little girl and have seen Turkish women use their cosmetics on their faces, finger nails and hair. Did the practice of using cosmetics originate in that country? Does the term cosmetics mean only lip sticks and rouges, or does it include also cold creams, powders and manicuring materials? N. P., Long Island.

Answer.—The December, 1932, issue of HYGEIA contains an interesting article entitled "Cosmetic Follies," by Dr. Herman Goodman.

The Bureau of Investigation of the American Medical Association has recently prepared and issued a pamphlet, "Cosmetics and Allied Preparations" (price 15 cents, postpaid) containing much interesting information on cosmetics whose use may involve a health hazard. It would appear that soaps, creams, powders, manicuring materials, hair dyes, rouge and other materials that have been or might conceivably be used for the purpose of improving the personal appearance could be included under the general term cosmetics. It may be said in general that many cosmetics are sold under exaggerated claims. For example: Soaps cannot do much, if anything, but cleanse the skin. Creams cannot do anything more than lubricate or soften the skin, and there is no such thing as a skin food, except, of course, the ordinary foodstuffs which are taken into the body for the nourishment of all the tissues, including the skin.

As to harmfulness of cosmetics, it is reasonably safe to say that at the present time harmful ingredients are not likely to be found in the better grades of cosmetics. The presence of lead, formerly more or less common in face powders, is no longer greatly to be feared. The colors used in rouges, lip sticks and eyebrow pencils are relatively harmless. It must be borne in mind, however, that substances which are harmless to the majority of persons may have a deleterious effect on unduly susceptible persons, and in these cases their use must obviously be discontinued.

As to the origin of cosmetics, it is safe to say that they originated, or at least were known, in the Orient, since archeologic discoveries indicate that peoples of old used cosmetics. Certainly cosmetics, if one wishes to call them that, were known to the American Indians, who painted themselves with natural pigments.

Schools and Camps

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Home school for nervous, backward children. *Best in the West.* Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrolment limited. Endorsed by physicians, educators. Booklet. E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

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Write for special information

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PEOPLE GROW THIS WAY TOO

(Continued from page 429)

the peculiar characteristics of the opposite sex, a tolerance which is at a minimum during the later years of the gang age. It provides acquaintance with numbers of potential mates from whom the child is eventually to choose his life partner. The age is a difficult one for parents because it is complicated by the young person's struggle to establish himself as an independent entity in society. Frankwood E. Williams says that the period of adolescence has two major functions to perform for the individual child: it should establish his economic and social independence from his parents, and it should carry him through to a wise choice of his life mate with the resultant establishment of his own family. Frequently the young person's struggle to assert himself as an independent individual leads him into exaggerated claims for liberty which create acute conflict with his parents. Frequently, too, his "shopping around" for a mate causes many an anxious moment. But independence of thought and action he must achieve if he is to take his place in the adult social and economic world. No one can doubt the importance of choosing a life mate wisely.

Another aspect of growing love is the change that occurs in the stimulus to attraction. In early love affairs the young person is likely to be swayed entirely by consideration of physical attractiveness or by social prominence. The prettiest girl, the handsomest boy, the football captain or the heroine of a school play are greatly sought. Sterling qualities of character as such have little drawing power. Young persons of high school and even of college age have not as a rule learned to look beneath the surface. As a result they fall in love with superficial qualities which cannot stand the test of time. Fortunately young persons soon learn to look for deeper and more permanent qualities. They learn to fall in love with spiritual as well as with physical traits.

An aspect of falling in love only with physical characteristics is that such love has little to offer but physical relationships. Under such circumstances the lovers have no challenge to interchange of ideas or to the building of companionship on an intellectual or a spiritual plane. The natural result is that they spend their time in the physical stimulation of the senses known as petting. Many young people pet not because it is expected of them

(Continued on page 468)

1 No growing child can have a strong, straight back whose diet is lacking in Sunshine Vitamin D.

2 Nor can any growing child have a fine, full chest without the precious Sunshine Vitamin.

3 No growing child can have sound, even teeth whose diet is lacking in food calcium and food phosphorus.

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5 Protein is needed by the fast-growing child for the development of tissue and muscle.

ARE MISTAKES IN DIET ROBBING YOUR CHILD OF A HUSKY BODY LIKE THIS?

AT NO time is *diet* so important as during the fast-growing years between babyhood and adolescence. It is then that the structure, soundness, stability of the body is largely fixed for life.

Even a slight deficiency — a lack of one vital food element may handicap the child for life. He may not develop properly — he may fail to build the physical structure which is his right and heritage.

Help *your* child grow sturdy by giving him Cocomalt in milk every day. This chocolate flavor food-drink provides *extra* proteins and carbohydrates, *extra* food calcium and food phosphorus.

It also provides *extra* Sunshine Vitamin D, which, with the calcium and phosphorus (supplied by milk and Cocomalt) aids in building strong bones and teeth.

Made as directed, Cocomalt adds 70% more food-energy nourishment to milk. Comes in ½-lb., 1-lb. and 5-lb. cans at grocery and drug stores. Mail coupon (and 10c to cover cost of packing and mailing) for trial can.

Cocomalt is accepted by the Committee on Foods of the American Medical Association. *That is your best protection* —your best guarantee of the importance of Cocomalt as a food and the truthfulness of its advertised claims. *Look for the seal on the can.*

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

Cocomalt is a scientific food concentrate of sucrose, skim milk, selected cocoa, barley malt extract, flavoring and added Sunshine Vitamin D.

ADDS 70% MORE FOOD-ENERGY NOURISHMENT TO MILK

R. B. Davis Co., Dept. K-5, Hoboken, N. J.
Please send me a trial-size can of Cocomalt. I enclose 10c to cover the cost of packing and mailing.

Name .....

Address ..... *State* .....

City .....

PEOPLE GROW THIS WAY TOO

(Continued from page 467)

or because it is the sporting thing to do, but because their conception of love is limited.

Promiscuous petting as a pastime usually stops when the conception of love has grown to include an appreciation of intellectual and spiritual qualities in the loved one. The reasons for this are at least two in number. First, it takes little time to fall in love with a pretty face or an athletic body; such qualities are obvious. One can fall in love on this basis a dozen times in a few months. Intellectual and spiritual qualities require exploration before they can be discovered and appreciated. It takes time to fall in love on this basis. That in itself limits the number of "affairs."

The second reason why growth of the love concept limits promiscuous petting is that when the love conception broadens, physical caresses cease to be an end in themselves and become an expression of intellectual and spiritual companionship. From a meaningless interchange of physical thrill they develop into a means of expressing rich and permanent spiritual values. Even adolescents can be made to see the difference between a temporary physical thrill and a sincere expression of permanent value. In fact, I am convinced that adolescents are so inherently idealistic, in spite of their assumed "hard-boiled" attitude, that they really prefer the ecstatic thrill of a caress that expresses spiritual understanding to the transient thrill of physical stimulation for itself alone.

Later adolescence is a time when young people are thoroughly susceptible to a broader vision in personal love. Given a reasonable opportunity, they take pride in growing up in their judgments of people, their control of primitive impulses, their appreciations of the more intellectual and spiritual values.

Love has a way of expressing itself other than in love affairs with individuals. Approach to maturity in love should mean a progressive widening of the circle of sympathetic interest. It should expand tolerance and understanding to include an ever widening circle of persons and things, so that eventually one identifies oneself with one's community, one's nation and finally with humanity. "Love thy neighbor as thyself," the doctrine of love as wide as humanity itself, is sound mental hygiene as well as sound religion. Until the individual has learned to submerge his own selfish

(Continued in column 3)

Beauty Advisers to Over 10 Million Women Recommend This

NEW DEODORANT

Prevent Perspiration Odor This New, Easy, Economical Way

No wonder Perstik, the new *"lipstick"* deodorant, is the year's cosmetic sensation! It *completely* banishes under-arm odor, is applied as *swiftly* and neatly as a lipstick, and *cannot* irritate skin or injure fabrics.

A touch of Perstik to the armpits each morning gives effective and *lasting* protection. When you go out for an evening of theatre or dancing, slip Perstik in your purse—Perstik is *easy to use—anywhere —anytime.*

Important

Insist on *genuine* Perstik in the octagonal white case with the black and silver cap. Genuine Perstik *cannot* harm your skin even after shaving. It can *never* injure clothing—use Perstik and slip right into your dress. And Perstik is economical to use—*only 50¢* and you have months of lasting protection against odor.

Get Perstik where you buy your cosmetics. If by chance you do not find it there, send 50¢ to *Perstik, 469 Fifth Avenue, New York.*

50c
at Drug and Department Stores

Perstik
THE "LIPSTICK" DEODORANT
Awarded the Good Housekeeping Seal of Approval
Trade Mark Reg. Patents Pending

PEOPLE GROW THIS WAY TOO

(Continued from column 1)

interests in favor of genuine altruism, he is incomplete in his personality development.

As anger, fear and love grow, so also do all basic emotions and all basic traits of personality. There is throughout this growth a progressive submerging of egotistic interests in favor of altruistic ones; there is an ever widening circle of identification of oneself with others in which one's own welfare becomes increasingly identified with the welfare of others. The more one grows toward maturity of personality, the more clearly does one recognize the essential unimportance of individual interest and the overwhelming importance of group welfare. Yet self effacement is not the goal of maturity. Each individual is indispensable as a unit in Life's scheme. He must learn to see himself as unimportant to himself, yet as vastly important to Life.

There is no age at which such lessons end. The earliest years of childhood are the most impressionable; adolescence has been called the renaissance of personality growth; but flexibility of personality can be indefinitely preserved by the person who is determined to grow. Personality at 20 should be better than at 10; so, too, it should be better at 60 than at 50. Clear insight into one's own needs, determination to remedy one's own defects and to round out one's own personality are the chief requisites to improvement.

Perhaps the vision of a personality grown to such maturity seems beyond possible accomplishment for the average person. Let me assure you that it is not. Any individual who wills to do so may climb from one rung of the ladder to the next, may progress from one stage to another, steadily making his actual living self match more and more perfectly the vision he has of perfection for himself. Let him but keep his vision, for a dream that is dreamed day after day becomes an accomplished fact.

"Health is certainly more valuable than money; because it is by health that money is procured; but thousands and millions are of small avail to alleviate the protracted tortures of gout, to repair the broken organs of sense or resuscitate the powers of digestion. Poverty is, indeed, an evil from which we naturally fly, but let us not run from one enemy to another, nor take shelter in the arms of sickness."—*Johnson.*

PROGRESS IN PREVENTIVE MEDICINE

(Continued from page 449)

neers who had not learned the whole lesson of Havana and who had their own ideas as to what was needed. Gorgas did his work for ten years under hampering restrictions that would have discouraged most men; but through it all he kept his head, persisted in what he knew was the proper course, accomplished a marvel of sanitation, converted the Isthmus from a pest-hole into a place where Americans and others could work safely and efficiently, freed it from yellow fever and reduced malaria and typhoid. By this way he made possible the speedy completion of the great work of building the canal without any great mortality such as had foiled previous attempts and had marked the construction of the Panama Railway, of which it had been said that every railway tie marked a death in the constructing force.

Other countries took up the work on Gorgas' lines, and the Gulf Coast, the Mexican Coast, Rio de Janeiro and Guayaquil were all freed from the disease; for several years no case of yellow fever was reported on the American continent. It probably lingered in a few out-of-the-way places, as in 1928 there was an outbreak in Rio, which was brought in by army recruits from a remote district. The disease lingers on the West Coast of Africa, whence it originally was brought to America by slaves or slavers, but it is being studied and combated, and it will be abolished from the world in time.

The triumph over yellow fever was education by demonstration. It was like the education in regard to the value of vaccination to prevent smallpox. This is the most effective method of education. But even the large demonstration is not enough. Basically, nearly all effective public health measures depend largely on the personal conduct of individuals, and they may be defeated by lack of popular support and by the failure of many individuals to do their part.

However, nobody enjoys having yellow fever or smallpox, and even unintelligent and ignorant people are usually willing to do their part in preventing these diseases when they learn that it is possible to prevent them. So it became necessary in these instances to teach the illiterate and the ignorant what had been accomplished and how successful were the measures. This education of the individual may be

(Continued on page 470)

FOR QUICK ENERGY!

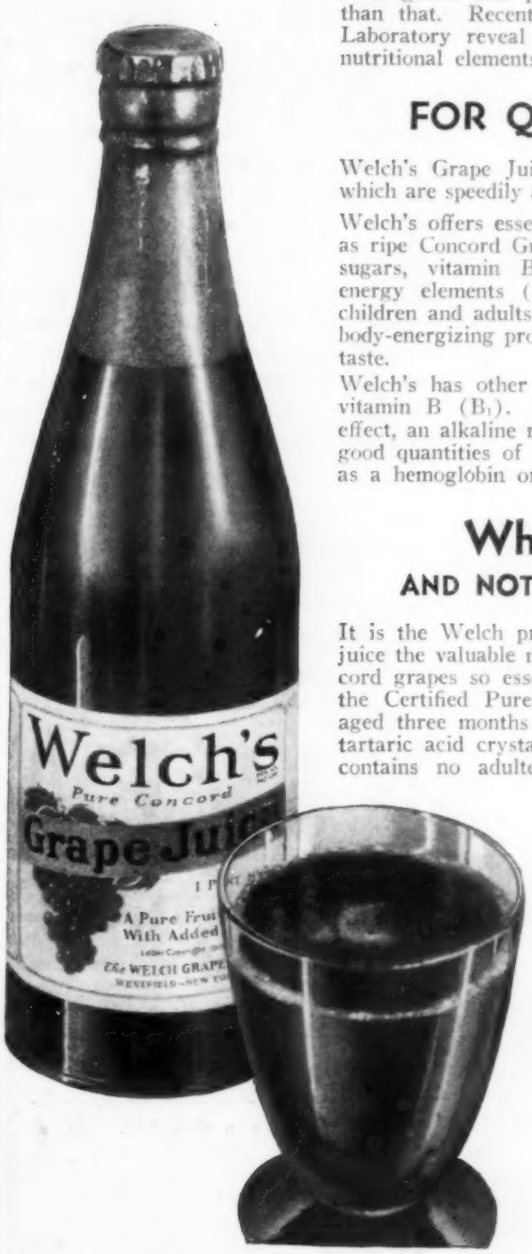
Welch's

Certified Pure — Pasteurized

GRAPE JUICE

It Possesses Valuable Nutritional Elements

You may think of Welch's only as a beverage, as a delightful and pleasing fruit drink. It is more than that. Recent tests in an Eastern University Laboratory reveal that Welch's possesses valuable nutritional elements.



FOR QUICK ENERGY

Welch's Grape Juice contains simple grape sugars which are speedily absorbed and require no digestion.

Welch's offers essentially the same nutritional value as ripe Concord Grapes fresh from the vine . . . sugars, vitamin B content, iron, potassium, and energy elements (286 calories to the pint). For children and adults, Welch's offers an abundance of body-energizing properties combined with a delicious taste.

Welch's has other dietetic assets, too. It contains vitamin B (B_1). Its fruit acids have, as an end effect, an alkaline reaction on the body. It provides good quantities of iron. Thus, Welch's is valuable as a hemoglobin or blood restorative.

Why Welch's

AND NOT CHEAPER JUICES?

It is the Welch process that retains in the bottled juice the valuable nutritional properties of ripe Concord grapes so essential to the system. Welch's is the Certified Pure, Pasteurized Grape Juice. It's aged three months to permit the natural but crude tartaric acid crystals to settle out of the juice. It contains no adulterants, no synthetic flavors, no artificial coloring, no preservatives, no added water. And it's inexpensive . . . the cheapest in 35 years. Welch's is undiluted grape juice, so many prefer to add one-third water to the pint. Mixed this way, Welch's costs less than 3½c a glass.

CERTIFIED PURE

By noted scientist through tests made in Eastern University Laboratory.

THE WELCH GRAPE JUICE CO., Westfield, N.Y.

PROGRESS IN PREVENTIVE MEDICINE

(Continued frob page 469)

difficult, as in the case of vaccination, when religious, sentimental or other prejudices have to be overcome; or as in the case of malaria, when large expenditures to be paid from taxation are necessary; or as in both these cases, when the word must be gotten in persuasive form to large numbers of illiterate or ignorant people scattered over a great area. Then reliance must be placed on the newspapers, the teachers, the preachers, the doctors and public-spirited people who are willing to take trouble.

In the instance of yellow fever the task was relatively simple. Havana, at the time of the Reed board's discovery, was practically under a military dictatorship, and an order, in addition to the machinery for disseminating and enforcing orders which was already in existence, was all that was necessary. The government of the Isthmus was benevolently despotic to an equal degree, and the Mexican, Brazilian and Ecuadorian governments were not less so. It was therefore possible in all these places to educate rapidly by decree and, if necessary, by force. It was not long, then, before the most ignorant laborer, Negro or Indian, knew that he had to avoid mosquito bites, stop breeding mosquitoes and send his sick to a hospital. With these things accomplished, the victory was soon won, and yellow fever passed from the scene. It was a victory so unexpected, so unforeseen, so dramatic, that it aroused a popular interest in public health which has ever since been the main support of public health officials.

As stated before, malaria fell with yellow fever in Havana and the Isthmus. It also fell on the Gulf Coast, in Mexico, in Rio and in Guayaquil, but nowhere were the results so brilliant as in the conquest of yellow fever. Nowhere was it wholly abolished. There are excellent reasons why this is so. The most important of these reasons are the following:

1. Most Anopheles mosquitoes are not domestic in their habits, as is the yellow fever mosquito, which breeds in the neighborhood of man and his habitations, in cisterns, rain barrels, empty tin cans, broken bottles and other small containers of water. The malarial mosquito, on the other hand, breeds in swamps, streams, puddles, ponds, jungles and hidden places. It is

(Continued in column 3)

Why do so many Nurses Depend on Nivea Creme

Many doctors and nurses have found from experience that Nivea Creme* is as necessary in their day's work as any other part of their equipment.

Nivea protects hands from roughening and drying out after constant scrubbings. It replaces vital oils and liquids removed from the skin by these washings. It is so soothing to tender skin that it is recommended for daily use in the nursery.

Keep a tube always handy at the wash-up basin—and don't forget that Nivea Creme is as necessary for protecting your face and hands "off duty" as well as "on".

Send the coupon for Trial Tube of Nivea Creme

NIVEA CREME

* Trade Mark Reg. U. S. Pat. Off.

P. Beiersdorf & Co., Inc., Dept. H-5
200 Hudson St., New York, N. Y.

Please send me a free trial tube of Nivea Creme.

Name.....

Street.....

City.....State.....

PROGRESS IN PREVENTIVE MEDICINE

(Continued from column 1)

therefore harder to locate, and its breeding places are much more difficult and expensive to eradicate.

2. The malarial patient, instead of being able, like the yellow fever patient, to infect mosquitoes only during a period of two or three days, can do so for weeks, months or occasionally for years.

3. Because malaria is not a self limited disease of short duration, as is yellow fever, there are always many more cases in an infected neighborhood, more sources from which mosquitoes can obtain infection, than in the case of yellow fever.

Nevertheless, much has been accomplished in reducing this disease, especially in military life. In 1901 the incidence of malaria in the U. S. Army was 708.52 per thousand persons; in 1902, 272.30; in 1907, 63.19; in 1927, 6.73 for the entire army, 13.14 in the Philippines and 42.90 in Panama. It is only fair to add that a considerable part of this reduction has been due to the change in the character of military service. If the army again had such service as it had during the Philippine Insurrection, the rate would surely be high again, although not so high as in 1901, as much has been learned since that time.

The prevention of malaria by mosquito control has been demonstrated. It is therefore right, proper and safe to educate people to rely on this means. The prophylactic use of quinine, however, was used before the parasite of malaria was known, and it is still used, but there is not unanimity of opinion as to its value; there is some experimental evidence to indicate that it has little, if any, value. To educate people to rely on quinine to the neglect of measures against mosquitoes might do more harm than good. In other words, in educating, one must be sure of the facts. Some of the most popular errors in regard to disease were at one time regarded by doctors as facts. Astrology, magic, the use of amulets, and many false notions as to diet and as to the effects of drugs were wrongly taught to the ignorant layman by those who thought they knew. Popular education should follow scientific demonstration and education of the educators.

[NOTE.—In the June issue of HYGEIA, Dr. Ashburn will discuss measures which have been perfected for the prevention of typhoid.]

SCHOOL MUST DEVELOP CREATIVE ABILITY OF CHILD

"We must do our utmost to develop in every child the peculiar personal power that makes him a person. We must keep alive and cultivate his creative imagination. We must teach him to know the thrill of creation and find life bearable."

Angelo Patri, author of the foregoing passage, urges training on a new principle based on the creative impulse, in an article on leisure in a recent issue of *Recreation*. He maintains that we are ready now to take the curse out of labor. But we must make sure to take the poison out of idleness. He advises in education: "The ordinary person must be trained in school so that he develops a hobby, an avocation, something he can turn to in his leisure time. It is the ordinary person who is going to have time for doing the things he likes to do, and those things he should learn to do in school. The school must change its standards, its methods, its equipment, its atmosphere, if it is to be a place where he develops his gifts, enriches his life with beauty, lives joyously, richly, with deep satisfaction in every breath he draws. The school must teach children the profitable use of leisure. In idleness and vacancy lies danger. We cannot allow the schools to go on as they have been doing without running the danger of setting man adrift, a rudderless creature, bound to founder in a sea of plenty."

A MESSAGE TO INFANTS

A message by Dr. R. H. Riley, director of the state department of health of Maryland, is directed to certain highly important citizens in the counties of Maryland—the infants. He explains:

"You don't have to wait until you are of voting age to have a status as an important citizen in Maryland. By the time you are 4 days old, your arrival is expected to be reported to the state department of health, and when you are 6 months old, the health officer of the county in which you live will send a letter to your mother advising her as to the ways by which your parents can safeguard you against certain infectious diseases. They are especially urged to have you protected against smallpox and diphtheria and this should be done before you are a year old."

The public knows less of medicine than of any other science.
—*Charles H. Mayo.*

No more nagging to get his hands *clean*

after he began playing this wash-up game

IT USED to be "like pulling teeth" to get young Bill to wash his hands. He had to be *dragged* to the washbowl—acted as though soap was his worst enemy.

Then came the Lifebuoy Wash-Up Chart! Dad read about it—sent for it—tacked it up on the bathroom wall. What a reform it worked! Bill actually began to be on *friendly terms* with soap and water! Didn't have to be told once to wash up!

The Lifebuoy Wash-Up Chart had turned the *duty* of washing hands into the most fascinating game—with a score card, weekly tally, membership in the League of Health Guards and everything.

This interesting illustrated Chart teaches that germs lurk dangerously on almost everything we touch—that therefore hands must be washed often, *always before meals*—and that the rich, penetrating lather of Lifebuoy Health Soap removes not only dirt, but *germs* as well! A real safeguard against the 27 germ diseases hands may spread, as listed by the Life Extension Institute.

Complexions thrive on it

Daily deep-pore-cleansing with creamy Lifebuoy lather is stimulating—brings a healthy glow of attractiveness to dull complexions. You know by its *extra-clean*, quickly-vanishing scent that Lifebuoy is different. Deodorizes pores. Effectively checks "B.O."

FREE: To parents of children who hate to wash—a "reforming" Lifebuoy Wash-Up Chart and school-size cake of Lifebuoy Soap for every one of them. Simply fill in and mail the coupon below. Then see your soap troubles vanish in cheery Lifebuoy bubbles!

LIFEBUOY

HEALTH SOAP

for face, hands, bath

free

LEVER BROTHERS CO., Dept. 195, Cambridge, Mass.

Please send me, free, Lifebuoy trial cakes and "Wash-up" Charts for my_____ children.

*Name*_____

*Address*_____

*City*_____ *State*_____

"SAFE MOTHERHOOD" IS MOTHER'S DAY PLEDGE

"To become a mother is the normal exercise of a great function. It should not be dangerous but safe if the mother and the father act with plain good sense and the mother has proper medical supervision and care," maintains the Maternity Center Association of New York. This organization challenges every one to make a pledge in the name of his own mother, to make motherhood safe for all mothers.

"So it is not enough to send flowers and telegrams and letters, to think kindly and pray earnestly for our mothers on this Day, nor to listen to sermons and tune-in on radio programs that make us choke up at the thought of motherhood. None of us is free in conscience to stop at that, while every year sixteen thousand mothers die in childbirth and ten thousand of these deaths could be prevented.

"When women know more they will go to a good doctor or clinic as soon as they find themselves pregnant and will make a regular visit every two or three weeks after that. When men know more they will help their wives to find the best doctor, to follow his advice and to get the food and rest and contentment that are needed. . . .

"On Mother's Day and before and after Mother's Day let each one of us personally accept the challenge of Mother's Day and resolve that every American mother shall have opportunity for proper care as she enters upon the most purely creative and one of the most noble works possible to human-beings—the generating of new life. Here is a cause worth fighting for! Here is a cry that must be answered: 'Make Motherhood Safe for Mothers.'"

DUTIES OF PARENTHOOD

Ralph P. Bridgman, director, National Council of Parent Education, outlines two chief duties of parents. The first obligation of parenthood is the growing in ability to understand the feelings, the purposes, the struggles, the thoughts and the secret ambitions of the children. When the parent has developed this understanding, his second duty is to give reasonable expression to his feelings toward these children. This does not mean uncontrolled expression of every parental emotion; it means a keeping within bounds that are reasonable and sincere.

For tuberculosis we prescribe not medicine but a mode of life.

—Bushnell.

STOP

before buying iodized salt and look carefully for this seal. Otherwise you may get one without enough iodine to prevent simple goiter!

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

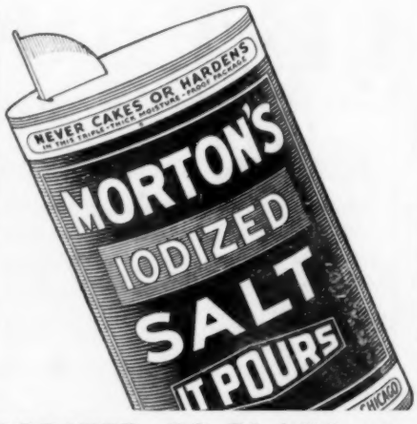
ACCORDING to the December 19, 1931, issue of the Journal of the American Medical Association, health department tests of iodized salts bought at random showed some to be so lacking in iodine that they were worthless as preventives of simple goiter among children.

This would indicate that many grocers are, in all innocence, selling iodized salts that afford no protection whatever to the children of their customers.

In an effort to safeguard both the consumer and dealer against fraudulent iodized salts, the Committee on Foods of the American Medical Association is now granting its Seal of Acceptance to brands known to contain sufficient iodine to prevent simple goiter and its accompanying physical and mental backwardness.

Morton's Iodized Salt was the *first* to win this coveted Seal of Acceptance, which is evidence that you can depend on it to protect your youngsters from simple goiter. That there is dire need for such protection is indicated by figures released by the United States Public Health Service, which show simple goiter to afflict 2 out of every 3 children in many localities!

WHEN IT RAINS IT POURS



IODIZED OR PLAIN, 10c

TWELVE HEALTH RULES FOR TEACHERS

Twelve health rules for teachers, emanating from the Greensboro city schools of North Carolina, are designed to protect the health of the students. The suggestions follow:

1. Keep down suggestions of fear and reports of widespread contagion. Wild statements by school officials, teachers and pupils must be prevented.
2. Keep the building well heated and ventilated—but not too hot.
3. Keep the building clean and free from dust.
4. See that children who come to school with wet feet and wet clothes are properly cared for.
5. See that children are allowed to enter the building during extremely cold or wet weather when they arrive.
6. Do not allow much, if any, outdoor play while the ground is wet.
7. Provide physical exercise in the room with fresh air available.
8. Attend to the sanitation in the cafeteria and watch the children in the selection of their food.
9. Watch for those children who appear to be sick. See that any one who is sick is not kept in the room with well children.
10. Stress simple health habits for protection of the group.
11. Teachers should lead the way by keeping well and strong. They should keep a close check on conditions and report serious cases to the nurse.
12. Good attendance is desirable but not at the expense of health. This situation calls for real teacher leadership and judgment.

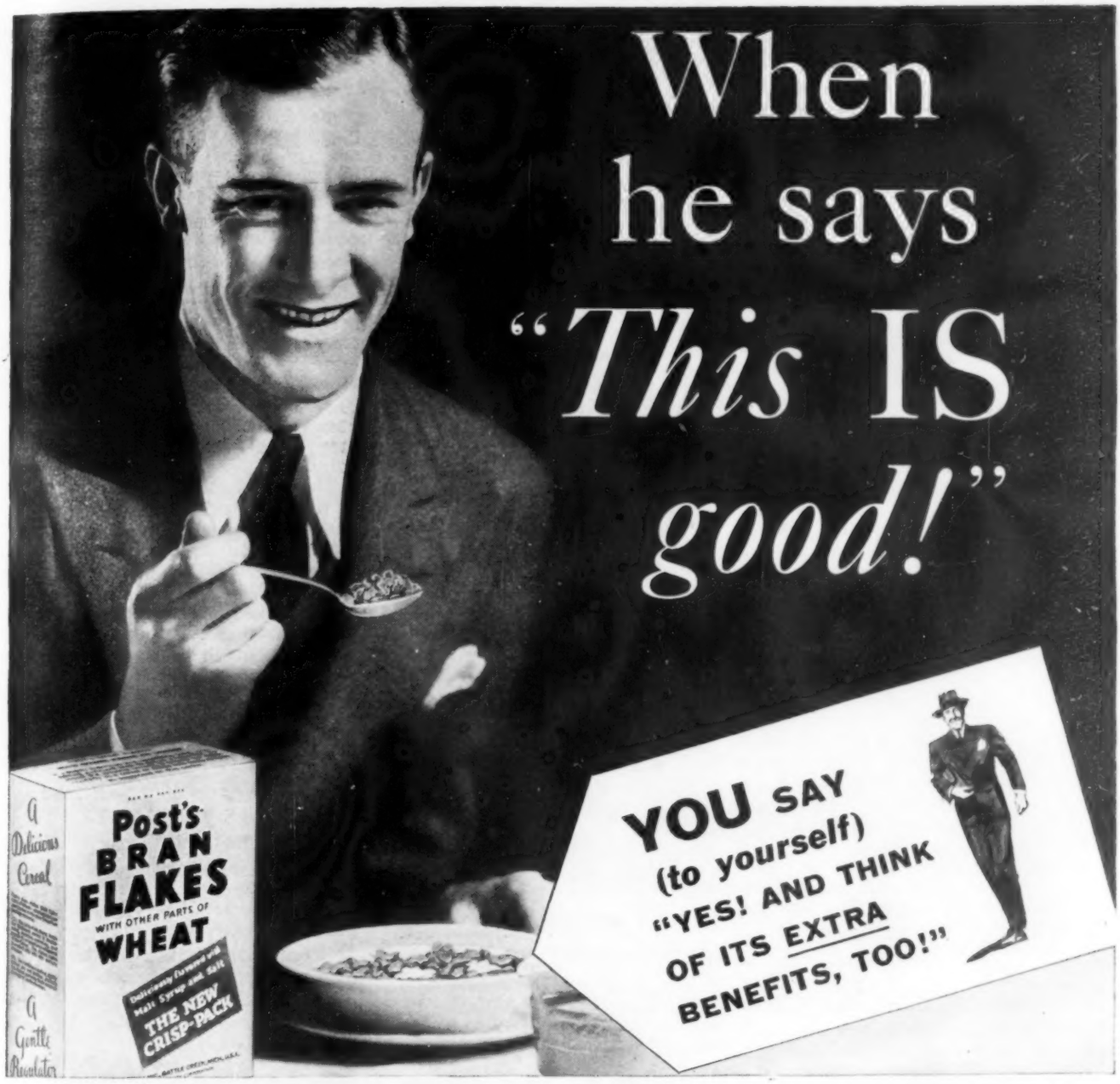
The Health Bulletin of the North Carolina state board of health reprints these rules and adds another important suggestion to the list; that is, the teacher should see that the toilet facilities of the school are adequate and kept clean at all times.

PURGE THAT CABINET

If you have not cleaned out the medicine chest recently, do it immediately. Get rid of the old things that will give no further use; arrange the other things so that they can be found when needed; separate the ones that may be a source of danger from the others, and place them so that the labels can be seen and read before the drug is put to use. These suggestions emanate from the department of health of the state of Maryland.

His complexion naturally muddy was rendered muddier by too strict an economy of soap and water.

—Dickens.


When he says "This IS good!"
YOU SAY (to yourself) "YES! AND THINK OF ITS EXTRA BENEFITS, TOO!"
A Delicious Cereal
Post's BRAN FLAKES
WITH OTHER PARTS OF WHEAT
THE NEW CRISP-PACK
A Gentle Regulator

HERE'S THE DELICIOUS-TASTING CEREAL THAT HELPS TO KEEP YOU REGULAR—AND FIT! SO GOOD YOU'LL WANT IT EVERY DAY!

THAT husband of yours! He eats Post's Bran Flakes for one reason only . . . because he thinks it is the finest breakfast dish he ever tasted!

But you, a wise provider, know how much *more* it is than that! You know that for years it has been professionally recommended as a simple, safe precaution against constipation that comes from lack of bulk in the diet. A dangerous condition that is often the unsuspected cause of headaches, listlessness, "run-down" health.

Gets at this CAUSE *of trouble*

Post's Bran Flakes helps to protect you against this trouble. For it provides the necessary bulk. And helps to prevent intestinal sluggishness, to insure *normal* elimination of food wastes. It also furnishes phosphorus, iron and Vitamin B, a builder of appetite.

That is why Post's Bran Flakes has an important part in this proven program that medical authorities urge: Regular exercise . . . fresh fruits and vegetables in the diet . . . water to drink between meals. And a generous serving of crisp, fine-flavored Post's Bran Flakes every day.

Children need it too!

How delicious it is you'll know when you try it! So start now to serve it regularly to your family—children and adults alike. They'll *all* love its luscious goodness . . . and you'll see, almost at once, how simply and surely it helps to keep *all* of you fit and regular—*all* the time!

Post's Bran Flakes is a product of General Foods. Your grocer has it.

POST'S BRAN FLAKES

WITH OTHER PARTS OF WHEAT

©G. F. Corp., 1933

SCHOOL CHILDREN NEED SUBSTANTIAL FOOD FOR BREAKFAST

"It is not unusual for the breakfast of the high school boy and girl to consist merely of a cup of hot coffee hastily gulped down with the cup held in one hand while the other is busy putting on the hat so that the youth may dash off to school," writes Dr. William I. Fishbein in *Scholastic Coach*. He continues by explaining what is an adequate breakfast for the high school boy or girl:

"Breakfast should be one of the most important meals of the day. It comes immediately after a long fast period of twelve hours or more. The youth should arise in the morning hungry and should welcome his breakfast. If he does not, there is something wrong with his health habits.

"In general, it may be said that breakfast should consist of some fruit, or fruit juice or vegetable juice, a cereal, a meat or meat substitute and a beverage. . . .

"The chief function of meat and meat substitutes, with the exception of bacon, is to furnish protein, but by including a quart of milk a day in the diet and by eating meat at one of the meals, the youth receives about as much protein as he needs.

"For those youths who, unfortunately, must take their exercise early in the morning, breakfast must be light, consisting perhaps, only of fruit and a beverage. It might even be better to omit the breakfast altogether and to eat it about thirty minutes after the exercise period is over."

FORMING MENTAL HABITS

Make a list of the things you do without thinking. Include habits associated with the body, such as sitting, walking, eating; also habits associated with the mind, such as speaking, reading, writing, planning. Note how each of these habits—at first developed with considerable effort—frees you from having to think out each time the details of the many acts that make up your life. In proportion as habits can be established which automatically provide for the lower phases of our lives, our mental energy is able to flow into higher activities. This is true for the race as for the individual. When the bare necessities of food, clothing and shelter are assured, the race turns to education, to art and to the higher expressions of mind and spirit. Cultivated mental habits are the foundation of intellectual distinction.—*The Journal of the National Education Association.*

Garments illustrated are Water Woolie with halter neck and sun back and Vanta Junior Wikie.

SUN is his friend but WIND is his ENEMY!

TREACHEROUS beach breezes, late-afternoon winds, the cold gusts that precede rain—are all enemies of your Baby's health! Be sure he's dressed warmly — even when sun-bathing!

Vanta Water Woolies and Sun Suits safeguard his precious health by supplying the needed protection. They're cut low at side and back to allow full benefit of the sun's wholesome rays—yet they're warm and snug over the chest and tummy, the regions you want protected most.

Let Vanta Water Woolies and Sun Suits safeguard *your* Baby's health this summer. Every Mother can afford this protection for her loved one, for the prices are extremely reasonable. Be sure to see the new 1933 models of Vanta Water Woolies at your favorite department store.

A Helpful Book —FREE

The Toddler tells you how to train your child during the "neglected age" from 2 to 6 to be resourceful rather than dependent upon others. Your free copy may be had at the Infants' Department of your favorite store.

The Famous Vanta Sun Suits with mesh front and warm elastic-knit trunks. Crotch is white-lined for safety. In the latest colors.

Earnshaw Knitting Company

Dept. H-5 Newton, Massachusetts

Vanta Water Woolies and Sun Suits

Originators No Pins—No Buttons. Self-Help Garments, Sun Suits and Water Woolies.

AVOID TRICHINOSIS BY COOKING PORK WELL

Because pork is selling cheaply at the present time, a great deal of this meat is being used in the average home. For this reason it is most timely to issue an important warning. Cook pork well. Untreated raw pork or improperly cooked pork is the cause of trichinosis, a parasitic disease which is often fatal.

Some of the processed pork products are Italian style ham, coppa, capicola, cured boneless loins, loins in casings and forms of dry or summer sausage. When there is any doubt as to the previous treatment of pork products, they should be well cooked before being eaten.

The U. S. Department of Agriculture has a well established record in regard to the inspection of pork. In fact no case of the disease occurring during fifteen years of observation has been traced to pork products prepared in establishments operating under the federal meat-inspection service. It is well, however, for each family to take every precaution against this disease, the U. S. Department of Agriculture suggests.

AFRICANS HAVE SPECIAL IDEAS REGARDING HOSPITALS

The following paragraph is taken from "Friends of Africa" by Jean Kenyon Mackenzie; it describes an interesting African philosophy:

"The African likes to die in his own village, and often when in hospital pleads to be taken home if he feels the end is near. This is acceded to, as it makes people more willing to come if it does not involve the prospect of dying away from home. It follows that refusal of the request is interpreted as refusal to allow a patient to die, with sometimes surprisingly effective results. One of my assistants, sent to 'buck up' (bakapi is now in the vernacular vocabulary) a desponding patient, came back with the assurance that it was all right—he wouldn't die now. When asked how he had accomplished the task of making him will to live, he said he had explained it was a rule of the hospital that no one was allowed to die there, without special permission, and any infringement on it would very much annoy the doctor and lead to a lot of trouble for the man who broke the rules. Taboos being a communal rather than a personal matter, the patient was duly impressed and recovered to save his friends embarrassment!"

AUTOMOBILE ACCIDENTS CAUSE HIGH DEATH TOLL

A graphic and pictorial booklet has recently been published by the Travelers Insurance Company, entitled, "They Call Us Civilized." Its purpose is to show in the most startling manner the number of deaths and injuries caused annually by automobile accidents.

For example, it is shown that during all the wars in which the United States has engaged as a nation—the Revolutionary, the War of 1812, the Mexican War, the Civil War, the Spanish-American War and the World War—Americans who were killed in action or who died of wounds numbered less than 300,000. During the last fifteen years, a period approximating the total duration of these six major wars, Americans who were killed in automobile accidents within the United States or who died of such injuries have numbered 325,000.

The world shuddered at the Titanic disaster, which took 1,517 lives; the Palm Beach hurricane with 372 deaths; the Knickerbocker Theater collapse with 98 deaths; the San Francisco earthquake with 500 deaths; the explosion of the Battleship Maine with 260 deaths; the wreck of the Shenandoah with 14 deaths, and the Ohio State Penitentiary fire with 317 deaths. The total sum of lives taken by these disasters was 3,078; yet what a contrast this number is to the 29,000 deaths that were recorded as the automobile death record of 1932. The world may well shudder at such a figure!

WORTH OF THE MIND

In the great scheme of things each part has its place—the soil and the sea, the flowers and the animal kingdom. Many of these are truly marvelous—the charming life of the birds, their freedom in flight, their skill in nest-building, their exquisite art in song. But beyond the most gifted of all animal creation comes man with a larger control over his own destinies than any other creature. The center of this control is the mind, the supreme gift of all creation. Were you to inherit a million dollars would you not think carefully how you should manage that great heritage? You have a far greater gift in your own mind and the possibility of using that mind day after day throughout life to determine your achievement and destiny. The first mark of a student is an appreciation of the worth of his own mind.—*The Journal of the National Education Association.*

New-type handkerchief wins nation!

Illustrations and text copr. 1933, Kleenex Co.

Disposable Tissues in place of germ-carrying handkerchiefs! Price now 25c

KLEENEX changed the handkerchief habits of a nation! Today one sees these health tissues everywhere. A new idea, startling, revolutionary—yet thousands instantly recognized the value of a *disposable* handkerchief.

Kleenex actually costs less than laundering . . . costs so little that each tissue may be used just once, then destroyed.

Kleenex is soft—positively downy of texture! Absorbent—many times more absorbent than cotton or linen! Always gentle. Always dry—for it's used but once.

Who, having tried this clean, civilized way, could wish to return to the unsanitary handkerchief during colds?—a germ-trap that's used over and over—stored in laundry bags to spread infection—then must be washed.

Many ways to buy Kleenex

Kleenex is available in rolls and packages at 25 cents; in extra-large tissues; and in the form of finished handkerchiefs known as 'Kerfs. At drug, dry goods and department stores.

KLEENEX *disposable* TISSUES

A handkerchief used during colds should be destroyed! Kleenex made this possible. Disposable—yet amazingly inexpensive.

Two forms of Kleenex are particularly pleasing to men—the extra large size tissue—and the smart, bordered tissue handkerchiefs called 'Kerfs.

Children's colds are likely to have serious complications—they need the protection Kleenex gives.

If children like chewing gum, *let them chew it and enjoy it* . . . . .

It is good for them. Probably nothing else has ever offered so much innocent pleasure for so little money as chewing gum. There is a reason and a time and a place for gum.

N-10

The National Association of Chewing Gum Manufacturers

Add Zest to Health Teaching

Sir Walter Raleigh discovered fire breathers here in America and, at once, aroused Europe's imagination and curiosity to explore and settle this continent. Hence, we have the United States. A little imagination mixed in with Health Teaching will kindle the children's interest to browse around into the facts of health, make health teaching a great deal of fun, and, incidentally, more fruitful in health-living results.

A Program for Health Education

The Joint Committee of the N. E. A. and the A. M. A. has compiled this program for the use of teachers in primary grades through high school and normal college. It lends itself well to the needs of teacher-training institutions. It is a source of constantly new ideas for health activity to the teacher of health. 1930 paper cover edition, $1.25; 1930 cloth cover edition, $1.75.

PAMPHLETS

Send to the American Medical Association for pamphlets and charts on all important phases of health activity—disease prevention (typhoid, scarlet fever, smallpox, diphtheria, etc.), infant welfare, diet, exercise, patent medicines. A catalog of published pamphlets will be sent free upon request.

PLAYS

These Plays, containing real health lessons give young pupils a chance to act out health ideas, to feel that good health is real. They make capital health activities.

The Good Health Elves.—17 to 25 characters. Set of 17 copies, $2.00. Single copies, 15 cents each.

The Trial of Jimmy Germ.—8 characters. Set of 8 copies, 35 cents. Single copies, 10 cents each.

The Friendly Brushes.—11 characters. Set of 11 copies, 50 cents. Single copies, 10 cents each.

The Magic Fluid (Diphtheria Antitoxin).—8 characters, with chorus, "King's subjects," etc. Set of 8 copies, 35 cents. Single copies, 10 cents each.

The School Lunch Room.—11 to 20 characters. Single copy, 10 cents; set of 10 copies, 45 cents.

Descriptive list of 12 plays is given in the catalog.

A Book of Health Stories

"The New Healthyland" is a compilation of stories, plays, poems and puzzles, and health letters taken from a 3-year issuance of HYGEIA, the Health Magazine. The stories and plays, with their health lessons will appeal to the imaginations of children in the grades. Bright pictures, colorful cover and clear large type makes this book instantly attractive. There are 168 pages, size 8½ x 11½, price, $2.00.

Free to Teachers

"Health Teaching Plans from Hygeia"—a 48-page booklet presenting 27 concrete health teaching plans other teachers have used and found practical. These projects which are suitable for kindergarten, grades and high school, have been reprinted from Dr. J. Mace Andress' Department, "Health and the School," appearing in HYGEIA each month.

TO ORDER Check the items desired, detach this advertisement and return with remittance

American Medical Association, 535 North Dearborn Street, Chicago, Ill.

Please send me items checked on this page. Remittance for $..... is enclosed.

Name.....

Address.....

FIRST WEEK IN MAY WILL BE DEDICATED TO BOYS

Boys' Week is being held this year from April 29 to May 6. Its slogan is "Boys—A Nation's Greatest Asset." The growth of this movement began in 1920 through the Rotary Club in New York City. Last year, Boys' Week was generally observed throughout the world.

The purposes of the observation are to focus public attention on the boy as one of the world's greatest assets by making the nation think in terms of boyhood; to interest every one in boys, to interest boys in themselves and to emphasize fundamentals in character building for citizenship; to develop a community esprit de corps in the home, school, church and spare-time organizations which deal with boys; to advocate for every boy an equal chance to work out his destiny without the handicap of underprivilege or over-privilege.

Many communities are desirous of expanding Boys' Week into a Youth Week, making provision for the girls as well as the boys in the observance of the week. If any community desires to do this, there is no objection to its doing so, the National Boys' Week Committee for the United States explains.

MAY DAY ACTIVITIES

Every home, school, kindergarten and nursery school should plan a Child Health Day observance on May Day or earlier. The slogan this year, "Mothers and Children First," is a broad term which should furnish a basis for special activities in the home and the community, as well as in the school. The subjects to be considered for homes may range from clean milk, pure water, heating and lighting to sharing work and medical supervision. Community health and protective measures may include sanitation, hospital service, good roads, police protection, health supervision of mothers and babies and of children through adolescence, the Indiana state board of health suggests.

MY MOTHER SAID:

Don't be too fast in making up your mind,
Or saying what you will or will not do,
But once you have decided, let folks find
That they may utterly depend on you.

—*Peter A. Lea.*

with HORLICK'S

FOR intense study at school—vigorous play outdoors he needs extra nourishment to carry him through. That's why wise mothers insist on giving their children a foaming glass of Horlick's Malted Milk after school. It renews energy quickly—aids in building vigorous muscles and strong bones. And children love Horlick's—no need to coax them to take it. Follow this advice, mother—get a package of Horlick's from your druggist today. Be sure to get Horlick's, the original, and not an inferior mixture of skim milk, malt powder and ordinary sugar.

ACCEPTED AMERICAN MEDICAL ASSN.

Horlick's
The Original Malted Milk

HORLICK'S MALTED MILK CORP.
Dept. H-18, Racine, Wis.
Please send me.....weight charts for pre-school children and.....charts for school children for recording by a graph the weight progress of individual children.
.....
.....
.....

ADVERTISING INDUSTRY BEGINS TO CLEAN HOUSE

A permanent review committee, which is to operate as a court of appeals, has been established within the advertising industry, according to an announcement made in a recent issue of *Printers' Ink*. The purpose of the committee is to develop a code to control advertising practices in order to prevent a continuing trend toward the discrediting of all advertising. Already the code drawn up includes seven points that tend to discredit certain forms of advertising. They include:

1. False statements or misleading exaggerations.
2. Indirect misrepresentation of a product or service through distortion of details, either editorially or pictorially.
3. Statements or suggestions offensive to public decency.
4. Statements which tend to undermine an industry by attributing to its products, generally, faults and weaknesses true only of a few.
5. Price claims that are misleading.
6. Pseudoscientific advertising, including claims insufficiently supported by accepted authority or that distort the true meaning or application of a statement made by professional or scientific authority.
7. Testimonials which do not reflect the real choice of a competent witness.

A current comment in *The Journal of the American Medical Association* expresses the hope that this movement in the field of advertising, begun under such excellent auspices, will lead to much needed reforms.

A DOCTOR IS PROMPTLY REMUNERATED

In "Friends of Africa," by Jean Kenyon Mackenzie, the following incident is related in the words of one of the doctors:

"I had on one occasion operated on an oldish man whose wife insisted on being allowed to remain with him. Seeing her looking very anxious at the close of the operation, apparently uncertain whether he was alive or dead, I proceeded to wake him up, in order to reassure her. Slowly recognition of me dawned in his eyes, and I shouted cheerfully, 'Wake up now. The operation is finished.' He nodded, suddenly sat up, and fumbling in his loin cloth, produced two pennies which he held out to me—two being the regulation fee for treatment! Was ever surgeon more promptly paid?"

HOMELESS WHO ARE ILL NEED SHELTER

There is an urgent need of a convalescent shelter for homeless men and women discharged from overcrowded hospitals or being treated in clinics when they are really in need of hospital or convalescent care, the Welfare Council's Coordinating Committee on Unemployment was recently told by representatives of the social service departments of public and private hospitals.

Blanche Potter, secretary of the executive committee of the Social Service Bureau of Bellevue and Allied Hospitals, makes the following explanation:

"This need has been increasing steadily. While we realize the difficulty in securing funds to meet the tremendous demands upon the social resources of the city, it does seem a very poor economy to get patients partially on their feet, discharge them to inadequate shelter, only to have them return a few days later, again acutely ill, and also a very poor health program to send such patients out into the streets and lodging houses to spread infection."

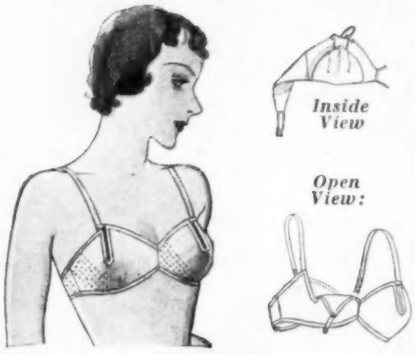
MODERN EDUCATIONAL PHILOSOPHY IS OUTLINED

A list of ideals and attitudes has been used as a measuring instrument in a recent survey of the schools of Chicago. The list is offered as embodying the point of view of the best modern educational philosophies:

1. The majority has a right to make decisions in a democracy.
2. The minority has the right of free speech in attempting to convert the majority.
3. Change is both an inevitable and a desirable accompaniment of growth.
4. A good citizen has learned to cooperate in groups of his fellows, each individual contributing to the welfare of the group and benefiting as the group benefits.
5. The good citizen puts his trust in thinking as the intelligent method, both of learning and of solving his own or the state's problems.
6. Self appraisal is an essential attribute of a good citizen.
7. Self direction is an essential attribute of a good citizen.
8. Self control is an essential attribute of a good citizen.

"The intelligent cooperation of the public is the all powerful weapon we seek in our war against disease."

Maiden Form
NURSING BANDEAU



For mothers who require a nursing brassiere but do not need diaphragm control—this bandeau is *scientifically* designed to give *perfect* bust support, yet to allow complete freedom below. Of porous, flesh-colored cotton mesh, it has breast shields of rubber and absorbent fabric with narrow tape holders for pads of sanitary gauze. *See upper sketch.* The center fronts unfasten at the shoulder straps—for easy access to the breasts.

No. 382—$1.00.

If your dealer cannot supply or for information on other nursing brassieres or brassieres and girdles for ordinary wear—write

MAIDEN FORM BRASSIERE CO., Inc.
Dept. H.A. 245 Fifth Avenue, New York

The SEX TECHNIQUE IN MARRIAGE • By I. E. Hutton, M.D.

"Dr. Ira Wile describes the book as a clear, succinct, non-emotional, authoritative and conservative exposition of the practical factors involved in making marriage successful on the sexual level. That describes the book exactly . . . It is primarily concerned with the conduct of the honeymoon and with the technic of the sexual performance." —Hygeia.

Acclaimed by the Medical Press Everywhere

At bookstores or direct from Price $2.00
EMERSON BOOKS, 126 Maiden Lane, N.Y.C.

PROTECT BABY'S FOOD

With this new tab, fingers never touch inside of nipple. It's shaped like mother's breast. The bottle is *easily* cleaned, sterilized, filled. Guaranteed against all temperature changes in normal use.

Hygeia
The Safe Nursing Bottle

PLEASE MENTION HYGEIA WHEN WRITING ADVERTISERS

PUBLIC HEALTH BUDGETS SHOULD NOT BE CUT GREATLY

It is universally agreed that economy in government is going to be necessary for some time to come. How much, then, shall be spent for public health? An editorial in *The Journal of the American Medical Association* discusses this important aspect of government supervision, as follows:

"Two types of activity are pursued for the health of the public: preventive medicine and medical care of the sick. The medical care of the sick poor is an immediate matter. Activities for the prevention of disease present a different problem. It has been customary to divide medicine into curative and preventive. Superficially this may be a good division, but much so-called curative medicine is preventive in effect. The treatment in typhoid, heart disease or cancer is intended to procure recovery from the acute illness and also to prevent untoward sequelae or recurrence. To this extent the practicing physician has always been, still is and always must be a practitioner of preventive as well as curative medicine. . . .

"The care of the public health has in the last fifty years achieved tremendous progress. Doctors initiated public health movements in primitive communities. Many of the discoveries on which preventive work is based were contributed by physicians. . . .

"Essential services for the public health must be maintained. No community can afford to skimp in the operation of water purification plants, nor can it let down the bars to milk supplies of questionable purity. Epidemics of diphtheria, smallpox or other controllable diseases should not be permitted to complicate the sufficiently pressing problems of the unemployed. Essential services must be maintained even while budgets are being deflated. Moreover, restriction of budgets should not permit loss of well trained and well qualified personnel."

"Millions of children and young people follow the old worn way to the schoolhouse. There they must find at least the opportunities offered so freely to their predecessors. If there must be a choice, build a schoolhouse and leave a road unbuilt, some streets unpaved. We must have education; it is America's boast. While other things are crumbling, our schools must be maintained."

—*William Frederick Bigelow.*